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(Page 49

BUSINESS WEEK

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1947-49=100		,			170
50	Aut	~			160
50		1	M		150
W. T			-	-	140
40					140
30					130
- N. / 4					120
20	1				
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	1953-55 Average	Year Ago	Month Ago	Week Ago	§ Late
SUSINESS WEEK INDEX (chart)	133.3	149.8	147.4	145.7 r	145.9
OSINESS WEEK INDEX (Many	100.0	147.0	147.4	143.71	173.7
RODUCTION					
Steel Ingot (thous, of tons)	2,032	327	1,525	1,483r	1,44
Automobiles Engineering const. awards (Eng. News-Rec. 4-wk. daily av. in thous.)	125,553 \$52,412	17,261 \$65,209	103,504 \$78,441	38,952r \$79,212	51,55 \$82,29
Electric power (millions of kilowatt-hours)	10,819	13,759	14,709	14,602	14,94
Crude eil and condensate (daily av., thous. of bbl.)	6,536	6,785	6,837	6,846	6,8
Bituminous coal (daily av., thous. of tons)	1,455	1,224	1,372	1,343r 313,476	1,2
Paperboard (tons)	247,488	335,940	320,464	313,475	326,6
RADE					
Carloadings: mfrs., miscellaneous and l.c.l. (daily av., thous. of cars)	70	56	54	54	
Carloadings: all others (daily av., thous, of cars)	47 121	35 139	48 122	45 139	1
Business failures (Dun & Bradstreet, number)	198	308	269	315	2
RICES					
Industrial raw materials, daily index (BLS, 1947-49 = 100)	89.2	94.2	90.8	91.6	91
Foodstuffs, daily index (BLS, 1947-49 = 100)	90.5	78.8	78.2	76.5	7
Print cloth (spot and nearby, yd.)	19.8∉	19.5€	20.2€	19.5¢	19.
Finished steel, index (BLS, 1947-49 = 100)	143.9	186.7	186.2	186.2	18
Scrap steel composite (Iron Age, ton)	\$36.10 32.394¢	\$40.83 31.125¢	\$31.83 33.000¢	\$32.50 33.000¢	\$32. 33.00
Aluminum, primary pig (U. S. del., E&MJ, lb.).	20.6€	24.7¢	26.0∉	26.0€	26.
Aluminum, secondary alloy #380, 1% zinc (U. S. del., E&MJ, lb.).	††	23.76€	24.00€	24.01€	24.0
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.)	\$2.34	\$2.01	\$1.91	\$1.97	\$2.
Cotton, daily price (middling, 1 in., 14 designated markets, lb.)	34.57∉	31.78€	30.85∉	30.60∉	30.6
Weel tops (Boston, lb.)	\$1.96	\$1.94	\$1.65	\$1.65	\$1.
NANCE					
500 stocks composite, price index (S&P's, 1941-43 = 10)	31.64	57.95	55.55	56.73	56.
Medium grade corporate bond yield (Baa issue Moody's)	3.59% 2-21/8%	5.14%	5.13%	5.01% 3¼%	5.00
	/0/0	.,,,,,	0.000	0,4,0	
ANKING (Millions of Dollars)					
Demand deposits adjusted, reporting member banks	††	60,206	59,392	58,603	58,8
Total loans and investments, reporting member banks	††	103,745	105,148	104,428	104,8
U. S. gov't guaranteed obligations held, reporting member banks	++	29,903	32,108 27,062	31,898 27,150	31,9 27,3
Total federal reserve credit outstanding	26,424	28,515	28,165	28,245	27,8
ONTHLY FIGURES OF THE WEEK		1953-55	Year	Month	Late
		Average	Ago	Ago	Mon
Consumer credit outstanding (in billions)		\$34.2	\$48.0	\$53.5	\$53
THE PARTY OF THE PROPERTY OF THE PARTY OF TH		\$25.2	\$36.8	\$41.4	\$41 \$13
Wholesalers' inventories (seasonally adjusted, in billions)		\$10.6 \$21.4	\$12.5 \$25.1	\$13.0 \$25.3	\$25

THE PICTURES—Cover—Herb Kratovil; 28—Worthington; 29—Studebaker-Packard Corp.; 30-31—(left top) Tibor Hirsch, (middle and right) James Drake; 34, 36—Joseph Papin; 52—David Henkin; 53—(top) R. Wenram, (bottom) Herb Kratovil; 75, 77, 78, 80-Herb Kratovil; 86-87—Ernest Reshovsky; 93—Pictorial Parade; 101—Why; 107—Pictorial Parade; 111—Herb Kratovil; 126-127—Leonard Nadel; 141—(right) Federal National Mortgage Assoc.; 148-149—Tibor Hirsch; 156—C. A. Buzek; 163, 164, 168—Syd Landi; 174—Productograph



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READERS REPORT

Reenacting the War

Dear Sir:

BUSINESS WEEK'S timely treatment of the economic aspects and entrepreneurial potentialities of the forthcoming Civil War Centennial [1961-65] [BW-Aug.20'60,p60] will doubtless inspire some hesitant enterprisers to get into the show.

Your careful reader is moved to pray for space to make a couple of observations regarding your article. First are two corrections of misstatements of fact. It is not true with regard to the literature on the Civil War that "Most has been turned out in the last few years," unless your adjective "few" is meant to cover roughly the last half century. In the past ten years about 2,000 books on this subject have appeared, whereas the total writings during the past 99 years approximate somewhere between 35 and 40 thousand volumes.

You say that Centennial plans "include the reenactment of half the war's battles." To my knowledge not more than a score of reenactments have been publicized and since there were about 2,500 battles and engagements in the Civil War the percentage is more nearly one than fifty.

Most able and serious students of the Civil War don't think much of battle reenactments as a means of commemorating the centennial of America's most tragic and traumatic experience. . . . If the Centennial is to be "merchandised" for the benefit of the purveyors of goods and services rather than to be conducted as a tribute to the memory of the war's participants, it were better the anniversary years be allowed to pass unrecognized.

WILLIAM H. STAUFFER PAST PRESIDENT

RICHMOND CIVIL WAR ROUND TABLE RICHMOND, VA.

Dear Sir:

Your marketing feature on the Civil War Centennial is a dandy.

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W. H. SCHMIDT, JR, DIRECTOR OF PUBLIC RELATIONS THE BALTIMORE & OHIO RAILROAD CO.

BALTIMORE, MD.

Dear Sir:

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REYNOLDS GIRDLER

VICE-PRESIDENT SINCLAIR OIL CORP. NEW YORK, N. Y.

Dear Sir:

It is a little hard to comprehend why the Congress, or for that matter any American—including the editor of BUSINESS WEEK—would consider it necessary to "celebrate" the 100th Anniversary of the Civil War... It certainly seems in very bad taste for a publication such as yours to give the front cover to this type of thing. I was particularly disturbed with your use of the word "celebration" of the anniversary of a conflict that killed 600,000.

R. A. Potts

VICE-PRESIDENT
WATSON PUBLICATIONS, INC.
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No Changes Planned

Dear Sir:

I am afraid that the usually accurate reporting staff of BUSINESS WEEK slipped when it reported [BW—Aug.13'60,p108] that A. C. Nielsen Co. is "aiming for a listing on the New York Stock Exchange," and that its chairman, A. C. Nielsen, Sr., is "negotiating to buy several smaller market research outfits" and "wants to improve the market for his shares."

We are not, in fact, aiming at a listing on the New York Stock Exchange, and I am not negotiating to purchase any other companies. Furthermore, my effort to improve the market for our stock is limited strictly to my usual efforts to help my company increase its sales and profits.

ARTHUR C. NIELSEN

CHAIRMAN

A. C. NIELSEN CO.
CHICAGO, ILL.

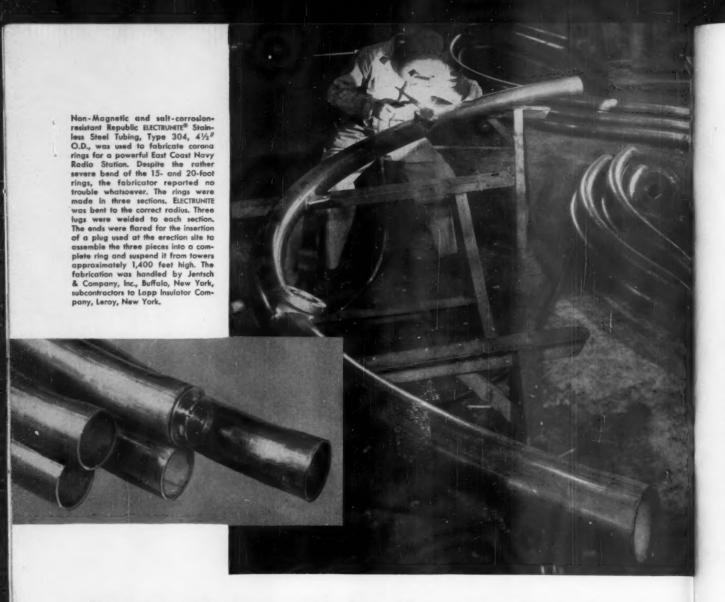
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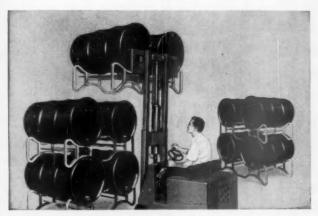
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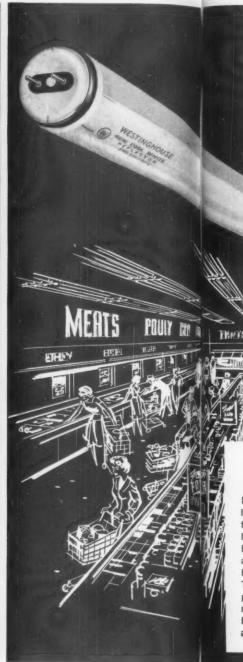
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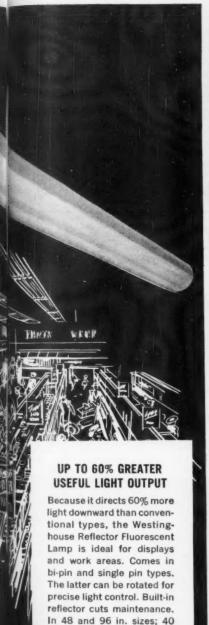




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INDUSTRY'S CHEMICALS

what's making news?

Much of the marketing action of Dow's industry-oriented teams can be neatly defined as concerned with the research and development of chemicals for specific industries, such as the petroleum industry, the automotive industry, the pharmaceutical industry. But some markets are mavericks, defying limitation, with problems common to virtually all industry. The industrial cleaning market is one of these. Here, the development of a new product, or the application of an old product to a new use pays off across the board, for all industries.

SOLVENT RESEARCH HELPS SOLVE A SAFETY RIDDLE

Strange as it may sound, "cleanliness" can be a twoedged sword. Take the case of conventional solvents for industrial cleaning. For the production man, these materials do an excellent job of cleaning, but their toxicity or fire hazard (or sometimes both) is high on the list of riddles for the safety man. The solvent development program at Dow is directed toward solving the safety riddle while maximizing solvent efficiency. For example, here's what Chlorothene® NU—the latest Dow development in cold cleaning solvents—can do for you.

Industrial cleaning solvents grew up with mass production. But in the process of growing up, they put industry squarely between the horns of a dilemma. Production standards require

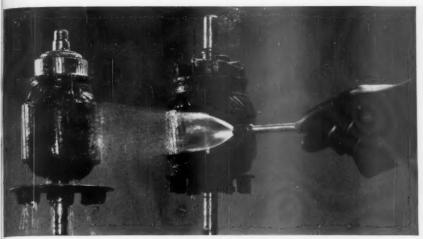
a cold cleaning solvent to be non-corrosive, economical, powerful enough to remove greases, oils, waxes, and other soils quickly, and to dry fast without leaving a residue. And safety demands that it have a low vapor toxicity rating and low flammability.

VERSATILE CHLOROTHENE NU

Dow's newest cold cleaning solvent—Chlorothene NU (specially inhibited 1,1,1-trichloroethane) takes dead aim

A unique combination of safety and solvent power makes Chlorothene NU the ideal cold cleaner for production lines.





The fire safety of Chlorothene NU permits maintenance spraying without costly protection systems.

at this very objective. In wipe, dip, spray, or slush cleaning applications, Chlorothene NU meets all the specific safety and production requirements of a cold solvent cleaner. Its high-power solvency quickly and thoroughly removes soils. It evaporates fast with no residue remaining. The special inhibitors in Chlorothene NU make it more stable; virtually non-corrosive to metals, including aluminum and zinc: easier and more economical to recover and re-use. Chlorothene NU has no flash or fire point by standard testing methods. And just as important, it has a vapor toxicity rating unmatched by most other common chlorinated solvents.

SAFETY PLUS VERSATILITY

Today, this versatile performer is cleaning everything from small tools to huge missile components, from simple electric circuits to complex electronic brains, often several times from the beginning to the end of production.

But where versatility in a wide range of applications is an advantage of Chlorothene NU, Dow also markets a variety of solvents with specific advantages for specific applications. Take the four members of the Dow family of trichloroethylene, for example: NEU-TRI®, neutral trichloroethylene; ALK-TRI®, alkaline trichloroethylene; HI-TRI®, high-purity trichloroethylene; and EX-TRI®, extraction-type trichloroethylene.

CLEANING MISSILE HARDWARE

HI-TRI solvent is a specially designed cold flushing agent. Its superior cleaning action, freedom from residue, no flash or fire point by all standard testing methods, and shock sensitivity, qualify it for the all-important job of cleaning missile hardware. ALK-TRI, the amine stabilized degreasing solvent, can be easily analyzed to maintain an exact solvent-stabilizer balance. NEU-TRI was designed for fast, efficient vapor degreasing. Its built-in neutral stabilizing system prevents chemical breakdown under heavy work load conditions. EX-TRI is designed for use in certain special extraction processes.

Another highly stabilized Dow solvent, perchloroethylene industrial, has a high boiling point (250°F.) which permits longer cleaning action, com-

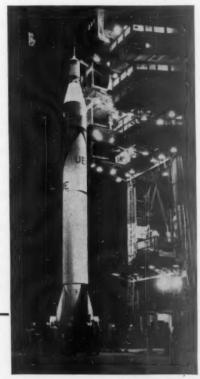
plete and thorough drying of the work, and greater economy, too.

Nonflammable, low toxicity Dow methylene chloride forms the base for many solvent paint strippers. These formulations cut through even the toughest paint and protective coatings, and lift them away from metal or wood surfaces in a matter of minutes.

Dow solvents are shipped in color coded drums to facilitate identification and handling.

STRONG-ARM CLEANING AIDS

No discussion of Dow's role in industrial cleaning would be complete without mentioning a pair of chemical workhorses that have distinguished themselves as ingredients in scores of cleaning compounds. Caustic soda is found in almost all heavy-duty cleaning compounds, and sodium orthosilicate contributes high detergent qualities, corrosion inhibition, and excellent rinseability to many cleaning operations. Dow is a basic source for caustic soda and sodium orthosilicate for many of the nation's leading industrial cleaning specialists.

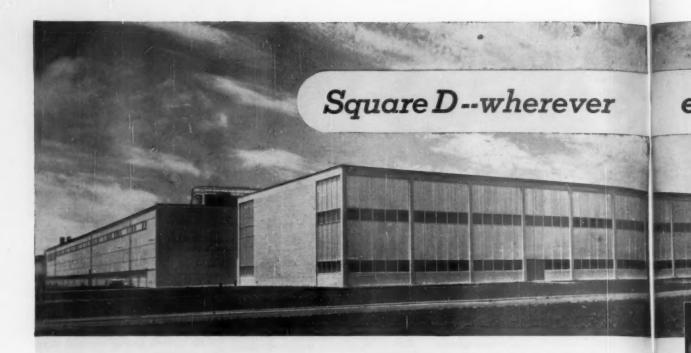


To avoid premature fuel ignition from residues, HI-TRI is specified in many cases for cleaning missile hardware.

YOU'LL FIND a complete discussion of the applications and properties of Chlorothene NU in a new brochure. Write for your copy. And if you wish a summary of the other Dow Solvents, ask us to include the folder METAL CLEANING SOLVENTS. Call your nearest Dow distributor or write: THE DOW CHEMICAL COMPANY, Midland, Michigan, Merchandising Department 303AF9-10.

See "The Dow Hour of Great Mysteries" on TV.

Dow



Largest of its kind ever built!..

LOCATED ON A 474-ACRE TRACT AT HINSDALE, ILLINOIS, the new International Harvester Farm Equipment Research and Engineering Center is the largest facility of its kind ever constructed. It houses under one roof nearly all of the people responsible for creating, designing and testing Harvester's farm and industrial tractors and farm implements.

As styled by Raymond Loewy Associates, the huge center is virtually self-sufficient. It provides complete dispensary, cafeteria and fire-fighting facilities. Water is supplied by onthe-site wells. The electrical capacity equals 60% of the maximum load of the entire village of Hinsdale, with a population of 12,000! Part of that load is consumed by an air-conditioning system which cools the equivalent of 700 average homes.

Square D electrical distribution and control equipment is used throughout the Center.



The ECAM Size 6 starter in the foreground controls a 250-hp MG set. In the right background is one of eighteen purge control panels which regulate the amount of air circulation and free the air of dangerous vapors before starting the electrical equipment in engine test cells.

FIELD ENGINEERING SERVICE is available through more than one hundred Square D offices, backed by an international network of over 1000 authorized electrical distributors and 21 plants in the United States, Canada, Mexico and Great Britain.

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THE QUALITY OF

The mind of Galileo—keenly analytical, superbly trained—led him to founding the science of experimental physics, which, centuries later, is revealing the mysteries of space. It is self-evident by his achievements that Galileo's mind reached a level of quality far above ordinary standards of excellence.

Within the same area of meaning, the quality of minds responsible for an engineering project can be evaluated only by results. When you check the record of Brown & Root's engineering through the years, the high quality of thinking reveals itself. Customer satisfaction from greater efficiency at lower costs has built a worldwide reputation for engineering and construction by Brown & Root.

"The knowledge of a single fact through a discovery of its causes prepares the mind to understand and ascertain other facts..."

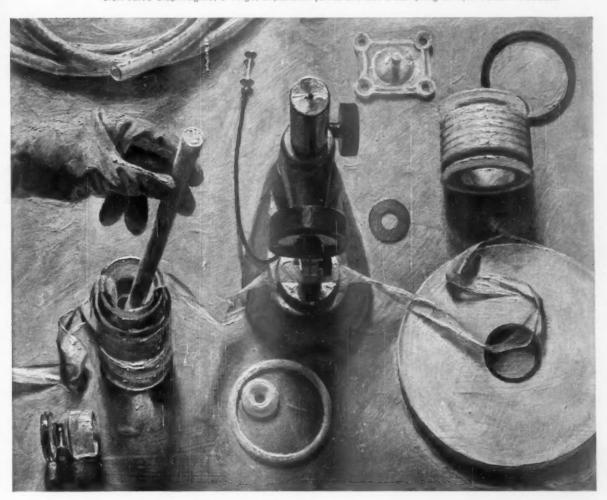
Galileo



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Acid and a sensitive comparator gage symbolize for artist Nicholas Solovioff the great inertness of Teflon* and R/M's special skill in processing this plastic. Close-tolerance tape, precision valve diaphragms, O-rings, expansion joints are but a sampling of R/M Teflon Products.



Extending the design horizon for Teflon. Impervious to chemical attack... boasting unique electrical and physical properties... this is Teflon, one of today's valued design materials. R/M has long been a processor of this remarkable plastic, supplying it as rods, sheets, tubes, hose and tape. Significantly, R/M has also developed many special molded and machined parts of Teflon, some of them once thought impossible to fabricate. This skill in adapting useful materials to new application demands is one of R/M's major services to industry. And it applies not only to engineered plastics, but also to asbestos, rubber and sintered metal—the four broad product-areas of R/M. Whatever your business, if you have a problem involving these materials, call on us for assistance in finding a practical solution. Raybestos-Manhattan, Inc., Passaic, New Jersey.

Registered trademark for Du Pont fluorocarbon resins

RAYBESTOS - MANHATTAN, INC.

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Flick-Reedy, winner of coveted Factory Magazine award "Ten Top Plants of 1960" Architect: Zay Smith & Associates, La Grange, III.; Designer: Norman Steenhof



VISITORS ASK

"What does it cost to work here?"

This bit of whimsy reveals a happy truth about Flick-Reedy Corp., a large air and hydraulic cylinder manufacturer near Chicago. It is a wonderful place to work. This 222,000-sq.-ft. Butler building and surrounding grounds include:

-A magnificent swimming pool for employees, their families and the community-complete with poolside tables and chairs in rich decorator colors.

-An auditorium-gymnasium where employees can enjoy shuffleboard, volleyball and ping pong during off hours.

—Lagoons stocked with fish, where anglers can while away leisure hours. The lagoons, like the pool, are also part of an ingenious water supply system which, combined with Butler fire safety, gives Flick-Reedy an extremely favorable insurance rate.

—Light, pleasant production and office areas, Butler's great structural strength permitted the installation of glass between these areas rather than heavy load-bearing masonry partitions. The effect is both a visual and psychological atmosphere of all working toward a common goal.

Does all this cost a fortune? No! Frank Flick, president, says the savings in initial construction, heating, insurance and maintenance afforded by the Butler system of building helped them get many outstanding features that would have been beyond reach with any other type of construction.

Your Butler Builder (See Yellow Pages under "Buildings, Metal" or "Buildings, Prefabricated") can build this kind of

Metal' or "Buttler Stee Tettow Pages under Buttlangs, Metal' or "Buildings, Prefabricated") can build this kind of plant for you. Ask him about the two new superior wall and roof systems—now in factory-applied Butler-Toners colors. Ask him about Butler financing, too. Or write direct.



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BUSINESS OUTLOOK

BUSINESS WEEK SEPT. 10, 1960



People are spending money cautiously. This goes for businessmen perhaps even more conspicuously than consumers generally.

And, for all praise heaped on the virtue of frugality, the average businessman would agree that too many people were now practicing thrift (other people, that is, for his own economizing is necessary).

This business of buying carefully is at the bottom of the steady decline in the volume of manufacturers' new orders.

And the decline in new orders, particularly in durable goods, is forcing some reduction in metalworking output (reductions that go beyond the familiar slump in basic steel).

This has the potential of a downward spiral: Output is cut to match incoming business; this reduces demand in some other direction; and that causes other cuts in output.

Liquidation of inventories in the durable goods lines, which became just barely visible in June, apparently has gone on at an increasing rate since that time.

The latest official figures, which take us only through July, show the dollar value of inventories in plants turning out durable goods at \$31.7-billion. That's only \$600-million down from the peak, but at least it establishes the trend that has been so much discussed.

Another indicator of inventory trends—and one that brings us much more nearly down to date—is business demand for bank credit or, more accurately, the recent fall in demand.

The Federal Reserve's weekly reports on member banks' transactions since midyear have shown a steadily declining loan trend. From the end of June to the last week of August, commercial and industrial loans were paid down by almost \$750-million. (During the same two months last year, the total rose almost \$500-million.)

Significantly, a little more than half the payback has been by companies turning out metals and metal products—the companies that have been working hardest at inventory liquidation.

Consumers, after showing a pretty normal tendency to borrow and buy earlier this year, have been a bit tight-fisted since April (a fact most merchants handling hardgoods have been stressing for several months).

New installment credit extended for purchase of automobiles, in particular, has slowed down by contrast with last summer. The pattern of new loans, in fact, has begun to look rather like 1956 (after starting this year as though it might take after fabled 1955 when the boom in new-car sales fed so freely off installment credit).

Buying of goods other than autos on time has resulted in less rapid rise in outstanding credit than last year.

The total has risen since the March low, but the July gain carried it only a little beyond last December's peak.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK SEPT. 10, 1960 Meanwhile, the one type of installment borrowing that seems to be running ahead is the personal loan (and time was when this might have been considered ominous, a signal that people were getting in trouble).

Manufacturers of durable goods did increase their backlog of orders during July. It was the first gain in eight months—but you can't take it seriously; it came about due to the month's unusual character.

Much of the metalworking industry shuts down for plantwide vacations in July. That cuts back production pretty sharply.

Meantime, new orders may or may not drop to match output. They dropped this year, and seasonal adjustment accentuated the move.

On the cold dollar figures, new orders for durable goods in July exceeded the value of shipments by about \$300-million. But, after the Dept. of Commerce finished adjusting for seasonal, it was the other way around.

Thus the adjusted chart of shipments against new orders shows a ninth consecutive month in which bookings ran behind sales. The chart, in fact, is beginning to look distressingly like early 1957.

The quickest way to get new orders for durables back up to a satisfactory level, of course, would be a turn in inventory demand.

It is true that no inventory "correction" since World War II has been accomplished in as short a time as this one has been running. But it is equally true that the 1959-60 rise in inventories wasn't large compared, say, to 1955-57 (and was quite small alongside 1950-53).

Top-heavy inventories really have existed only in a few spots: steel, new cars, certain appliances, and lumber.

By now, most of the steel that had been squirreled away must have been used. And dealers have to do or die right about now on autos and appliances (though the slack in homebuilding won't help appliance sales and is directly to blame for the woes in lumber).

Purchasing agents won't pinpoint any change in their inventory policy. The latest survey by the National Assn. of Purchasing Agents confirms further efforts to hold down forward commitments while liquidation of purchased materials continues apace.

Yet somebody must be in the market. Buyers representing 35% of the reporting companies said new orders had turned up in August (against only 24% detecting improvement the month before).

Sales of imported cars have fallen nearly 25% behind a year ago.

These models, which sold a record 60,000 last year, now seem to have shaken down to about 45,000 sales a month (against close to 60,000 in the big mid-summer months last year).

Now, with still more smaller U. S. cars coming out, the battle will be to see if imports can keep a market of even half a million a year.

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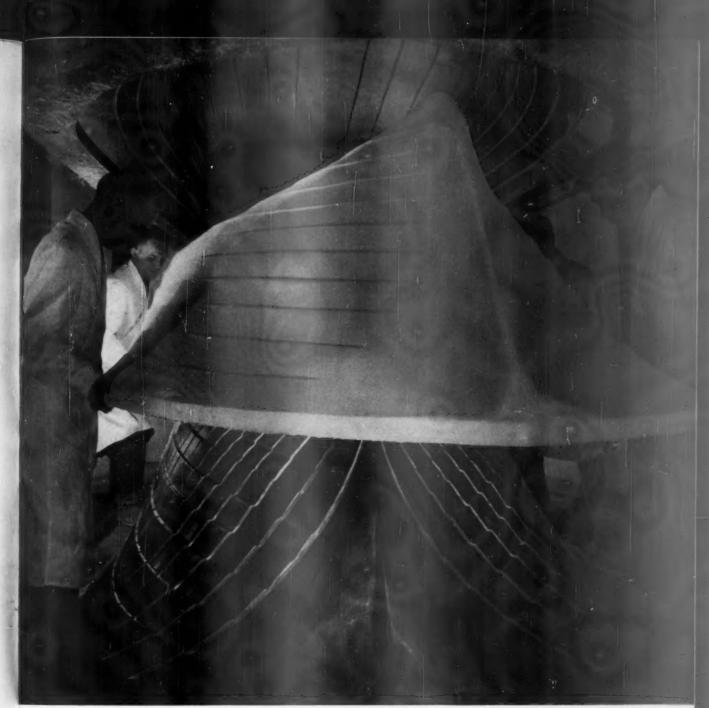


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Birth of a boat-with the help of Sun Oil

You can take it for granted that today's fiber glass boat hulls, molded in giant hydraulic presses, are leakproof. That's one of their greatest virtues. But a frequent trouble is an oil leak in the hydraulic press that molds the hull.

Yet this need be no problem, because Sunoco's research and development have produced quality oils designed to thwart leakage and to keep presses in continuous, trouble-free operation.

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CAPITAL SPENDING:

Flat at Home, Up Abroad

Government survey finds companies steadily reducing their domestic plans for 1960.

McGraw-Hill survey finds a contrary trend in U.S. corporate investment abroad. Companies are spending more than planned this year, plan to spend still more next year.

Prosperity and expanding markets overseas—particularly in Europe—account for the rise.

U.S. business is developing a split personality when it comes to capital spending, depending on whether the outlays are at home or abroad.

At home, capital spending will stop growing during the remainder of the year. Abroad, U.S. companies plan to continue into 1961 the lusty expansion of direct investment that has been in progress for some time (BW-Aug.8 '59,p23).

This divergence between domestic and foreign investment plans shows up sharply in two surveys whose results

were released this week:

• The halt in the growth of domestic capital spending was reported by the Sceurities & Exchange Commission and the Dept. of Commerce in their quarterly look at business investment plans. The survey showed that domestic expenditures, after rising abruptly during the first half of 1960, will remain stable at a \$36.9-billion annual rate during the second half. This means that capital spending has tapered off sooner—and at a lower level—than expected in earlier forecasts.

• The continued growth in foreign capital spending was spotlighted by the McGraw-Hill Economics Dept.'s second annual survey of the foreign operations of U.S. manufacturing and petroleum companies. The companies surveyed will boost their overseas spending 15%, from \$2.1-billion in 1959 to \$2.4-billion in 1960. And they are planning to invest more than \$2.5-billion in foreign facilities in 1961. The dynamic element is manufacturing: The manufacturers put \$935-million into foreign plants in 1959: this year, the figure will be \$1.1-billion, and next year, \$1.3-billion.

• Early Start—All through 1960, as a matter of fact, companies have been revising their foreign investment plans for the year upward, their domestic plans downward. When SEC and Commerce took their first look at 1960 spending plans last November, companies said they would spend \$37.5-billion on plant and equipment this year. Since that time, they have cut \$1.1-billion from their domestic capital budgets (chart, page 27).

A year ago, concerns included in the McGraw-Hill survey of foreign operations expected to lay out \$2.1-billion overseas during 1960. Now they estimate the year's total at almost \$2.4-

billion.

Total capital spending abroad by U.S. companies is actually larger than these McGraw-Hill numbers indicate, since they reflect only the expenditures of cooperating companies. This group accounts for about three-fourths of annual capital spending by all U.S. manufacturing and petroleum companies. This year's foreign outlays will make up about 15% of total capital spending by the manufacturing and petroleum concerns—and about 10% of the total for manufacturers alone.

This sizable chunk of investment overseas is something new in the evolution of the U.S. economy. A decade ago, capital spending abroad by U.S. manufacturers was a mere trickle by

comparison.

I. Incentives to Travel

The major motive for spending in foreign lands is the rapid growth of the European market. Manufacturing

investment in Europe is slated to rise 30% in 1961, compared with a 16% increase in total spending abroad by the manufacturers. About 48% of the producers queried by McGraw-Hill cited the prospect of "new markets" as their main reason for going overseas.

Another incentive is the wall of tariffs protecting some foreign markets-par-ticularly the Common Market countries -from goods manufactured outside their borders. These walls can be hurdled by direct investment in the nations that raise them. About 16% of the concerns included in the McGraw-Hill study pointed to trade restrictions as the chief stimulus for spending abroad. · Labor Not the Lure-For the most part, U.S. industry does not appear to be migrating overseas primarily to take advantage of lower labor costs. Only 6% of the companies cooperating with McGraw-Hill attributed their interest in foreign lands to low-cost foreign labor. This suggests that only a minority of manufacturers is locating overseas with an eye to exporting back to the U.S.

The McGraw-Hill survey reveals a relative shift away from Canada and Latin America, the traditional areas for U.S. foreign investment. Investment in Canada is slated to decline between 1960 and 1961, while in Latin America it will rise only slowly. The reason is apparently the slower rate of U.S. economic growth. Historically, capital spending in these regions has been chiefly oriented to providing raw materials-particularly minerals and oil-for the U.S. market. The problems of Canada and Latin America, of course. are complicated by a general softening of world demand for raw materials.

II. Impact on Exports

Will the boom in U.S. capital spending abroad lead to additional strains on the balance of payments, for example, by cutting into exports from home?

Few international economists fear that it will. One economist points out that much of the financing for U.S. direct investment overseas comes from foreign sources. He doesn't know exactly how much. But he contends that the share must be quite large because

Foreign Capital Spending by U.S. Companies Is Climbing

(Millions of Dollars)	ACTUAL		LANNE	D -
INDUSTRY	1959	1960	1961	% Change 1960-61
Primary Metals*	\$104.5	\$ 81.5	\$ 88.8	9
Machinery (incl. electrical)	249.0	351.1	410.8	17
Transportation Equip. (incl. o	utos) 215.4	258.5	310.2	20
Other Metalworking	31.7	25.7	34.7	35
Chemicals	191.0	246.4	285.8	16
Paper	31.0	31.0	32.2	4
Rubber	54.5	56.7	65.8	16
Stone, Clay & Glass	12.9	17.7	14.5	-18
Food & Beverages	32.9	42.8	43.2	1
Misc. Manufacturing (incl. tex	xtiles),. 11.8	15.1	18.3	21
ALL MANUFACTURING	934.7	1,126.5	1,304.3	16
Petroleum Industry	1,143.0	1,268.7	1,243.3	- 2
Manufacturing & Petroleur	m2,077.7	2,395.2	2,547.6	6

^{*}Includes some mining companies

Data: McGraw-Hill Dept. of Economics

NOTE: Dollar figures reflect only expenditures of cooperating companies.

These companies account for approximately ¾ of annual overseas expenditures of all U.S. manufacturing and petroleum companies.

Europe Gets Heaviest Play

Foreign Capital Expenditures By Manufacturing Companies

(Millions of Dollars)

1959	1960	PLANNED 1961
TOTAL934.7	1,126.5	1,304.3
Canada	243.7	232.7
Latin America 233.6	237.6	257.9
Evrope	500.9	650.7
Common Market Countries 157.3	269.2	355.5
Rest of Europe 222.0	231.7	295.2
Rest of World 101.6	144.3	163.0

32.7 57.9

Data: McGraw-Hill Dept. of Economics

U.S. Exports Climb, Too

Commercial Export Sales — Manufactured Goods				
Millions of Dollars INDUSTRY	ACTUAL 1959*	1960	1961	% CHANGE 1960-61
Primary Metals	\$ 667.9	\$ 781.4	\$ 804.8	3
Machinery	2,908.8	3,286.9	3,484.1	6
Electrical Machinery .	772.9	834.7	951.6	14
Transportation Eqpt., Including Autos	1,503.2	1,864.0	1,901.3	2
Other Metalworking .	657.4	644.2	676.4	5
Chemicals	1,600.9	1,889.1	1,945.8	3
Paper	337.1	347.2	361.1	4
Rubber	326.5	375.5	356.7	_ 5
Stone, Clay & Glass .	308.8	339.7	377.1	11
Petroleum	402.2	418.3	414.1	- 1
Food & Beverages	880.4	915.6	952.2	4
Misc. Manufacturing, Including Textiles .	1,483.1	1,483.1	1,527.6	3
TOTAL MFG	11,849.2	\$13,179.7	\$13,752.8	4

Data: U.S. Department of Commerce

GOUSINESS WEEK

"quite a few Europeans are complaining that American firms are taking too large a proportion of the investment funds coming into Europe's own markets."

This observer also argues that in many cases the profits from foreign ventures will come mainly to the U.S. companies, at least to the extent that they hold the equity capital and leave

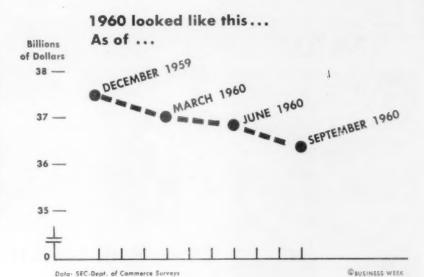
the debt instruments to the local investors. "If the payoff to these investments is large—as it promises to be in many cases," he continues, "we are in the process of building up a substantial return to our own shores of dividends and profits, which count as a plus in the U.S. balance of payments."

• Plus Sales-Some economists expect overseas investment to boost U.S. ex-

ports. They maintain that when a U.S. company goes abroad, it spreads its selling efforts over more products than just those it plans to turn out in the foreign plants. This creates a demand for some of the products of the plants back home. "We may end up by opening more markets than we lose," says an international trade specialist.

Besides, the U.S. investment in it-

Companies Kept Reducing Their Domestic Spending Plans for This Year



Spending for New Plant and Equipment in the U.S.

Billions of Dollars Seasonally Adjusted at Annual Rates

	(Actual) 1959 OCT DEC.		(Planned)	(Billions of Dollars)				
		JAN MAR.	- 1960 — APR JUNE	JULY- SEPY.	OCT DEC.	(Actual) 1959	(Planned) 1960	Increase
MANUFACTURING	\$12.87	\$14.10	\$14.70	\$14.6	\$14.8	\$12.07	\$14.55	21%
Durable Goods	6.16	7.15	7.40	7.3	7.3	5.77	7.28	26
Iron and Steel	1.14	1.60	1.60	1.6	1.6			
Nonferrous Metals	.31	.30	.30	A			116000000000000000000000000000000000000	
Electrical Machinery	.56	.60	.65	.7				
Machinery, Except Elec	.97	1.15	1.15	1.1	1.2			
Motor Vehicles	.74	.80	.90	.9	.9			
Transportation Equip	.38	.45	.40	A				
Nondurable Goods	6.71	6.95	7.30	7.3	7.5	6.29	7.28	16
Food and Beverages	.86	.90	.90	1.0	1.0			
Textiles	.50	.50	.50	.6	.6			
Paper and Products	.69	.70	.75	.8	.8			
Chemicals	1.31	1.45	1.60	1.6	1.7			
Petroleum and Coal	2.57	2.55	2.70	2.5	2.5			
MINING	1.04	1.00	1.05	1.1	1.1	.99	1.05	6
RAILROADS	.85	1.00	1.10	1.1	1.0	.92	1.07	16
TRANSPORTATION (other than rail)	2.15	2.00	2.15	2.2	2.2	2.02	2.10	4
PUBLIC UTILITIES	5.48	5.75	5.70	6.0	6.1	5.67	5.89	4
COMMERCIAL AND OTHER	11.19	11.35	11.60	11.9	11.9	10.88	11.71	-8
TOTAL	33.58	35.15	36.30	36.9	36.9	32.54	36.37	12

Data: SEC; Dept. of Commerce.

GRUSINESS WEEK

self stimulates the growth of foreign economies. As foreign markets expand, demand for exports from the U.S. may well rise along with demand for the output of the U.S. plants abroad.

The U.S. stands to benefit from another factor. About 90% of the spending overseas will be for new facilities, rather than the purchase of existing plants, and much of the new machinery

and equipment for these installations naturally will be bought in the U.S.

There are some signs that foreign growth is already a stimulus to U.S. exports. A Dept. of Commerce survey shows that U.S. manufacturers expect to boost their exports 4% between 1960 and 1961 (chart, page 26). This year, U.S. exports have surpassed expectations—helping a flagging economy.

• Trouble Spots—However, the economists also see some dangers in the splurge of U.S. foreign investment.

One man expresses concern about the impact of the recent drop in U.S. interest rates below those in most European countries (BW-Aug.20'60,p23). This might lead U.S. companies to finance more of their foreign operations in the New York money market and

increase the export of U.S. capitalwhich would be another drag on the nation's balance of payments.

Another economist fears that the U.S. balance of payments may be becoming increasingly vulnerable to recession in Europe—that the U.S. may get pneumonia when Europe catches a cold. If European economies fail to grow as rapidly as hoped, he says, there could be a sharp contraction in U.S. exports, aggravated by the buildup of production facilities by U.S. companies in Europe. In addition, companies heavily committed to long-term European spending would suffer.

But these disturbing possibilities are

But these disturbing possibilities are clearly not uppermost in the minds of executives of U.S. companies. The rich prospects they see abroad are at least partially compensating for the developing gloom that hangs over the capital spending picture at home.

III. End of the Boom

As a result of new caution in the atmosphere at home, it now appears that U.S. business will spend only \$36.4-billion on new plant and equipment in 1960—or \$1.1-billion less than expected last December.

This is the key finding in the SEC-Commerce survey of anticipated business spending for capital goods. Economists in Washington think the latest study definitely marks the approaching end of a capital goods boom that began two years ago. The outlook, they feel, is for a pronounced drop in capital goods spending early next year.

The current survey was taken about a month ago, and tabulation of the results has just been completed. Since the survey was made, pessimism about the economic outlook has deepened. This might shove fourth-quarter capital expenditures below the \$36.9-billion annual rate reported in the results.

Soft Spots—The most noticeable retreat from earlier forecasts is by manufacturers of durable goods. They hit their spending peak in the spring; since then, they have reduced investment programs for both the current quarter and the three months ahead.

Even so, hardgoods makers will lay out \$7.3-billion this year, 26% more than in 1959. And some of this year's biggest increases in purchases of new plant and equipment have been made by the hardgoods producers.

Among softgoods industries, outlays 30% higher than last year's are booked in chemicals, textiles, and rubber. But oilmen, faced with a glutted market for their products, intend to spend only slightly more than they did last year.

Public utilities, alone among major industries, are going ahead with expansions even more ambitious than expected earlier.



String Perforated Hose in Surf . . .



Hook Up Air Compressor and . . .



Air Bubbles Fence the Sharks Out

Sharks swept closer than usual to the New Jersey shore last month, and two bathers were seriously bitten. To avoid having its high season ruined by the scare, the Stockton Hotel at Sea Girt, site of one of the attacks, tried this system of protection, tested by the Worthington Corp.

S-P Turns Further From Autos

Naming of Francis as chief executive is sign of speed-up in plan to diversify through acquiring non-auto lines.

Along with its new-model cars, Stude-baker-Packard Corp. this week revealed a dramatic internal shakeup. The slow-moving auto company chose 71-year-old Clarence Francis (picture), retired president and chairman of General Foods Corp., as its new chairman and chief executive officer.

Francis' chief job will be to spur S-P's acquisition program, and shape its new look as a diversified company. Harold Churchill, 57, continues as president, but he will have little control of the auto company's daily doings. He will be given special projects in engineering and manufacturing—his forte.

A. J. Porta, who played a big role in unscrambling S-P's debt load two years ago, keeps the reins of S-P's auto business, a job he has held since last Januarv. William D. Mewhort, in charge of S-P's acquisition program for the past year, will work closely with Francis, a professional in the business of acquisitions.

• Must Pick Successor—One of Francis' first 'jobs will be to help pick his own successor. More than likely, such a man will come from outside the company, perhaps through a big merger. But Francis is not a mere caretaker as chief executive.

Actually, Francis has been acting informally in his new capacity for three months or so.

When S-P directors were unsuccessful in trying to pry away a man from another company to take over Churchill's job, Francis decided to accept the challenge himself. (Since his retirement from General Foods four years ago, he has been active in civic, business, and political ventures.)

"Two men convinced me I should take the job," Francis says. "I looked at Robert Moses and Herbert Hoover, their ages, the work they were doing, and I decided I could do it, too."

• Stem Challenge—Francis knows it will be a tough grind to keep S-P afloat, in spite of its relatively healthy balance sheet. Sales of the Lark, S-P's compact car, are down more than 15% from last year, and competition is bound to be stiffer next year; weakness of S-P's dealer organization adds to the gloom of that prospect.

What's more, the company's acquisition program, which would enable S-P to take advantage of its \$121-million in tax-loss credits, has been slow to unfold. This week, S-P announced the purchase of Clarke Floor Machine Co., a Muskegon (Mich.) manufacturer of floor

maintenance equipment. It was S-P's fourth acquisition outside the auto business in the past 16 months, but the four—two plastics companies, a small farm equipment maker, and Clarke—add only \$50-million in sales, \$5-million in earnings to S-P's books. (Two other deals are on the fire.) Meanwhile some \$16-million of S-P tax-loss credits will expire this year if they are not used; another \$34-million expire next year.

• Changing Role—Dissatisfaction with the slow acquisition pace—at a time when auto sales are slumping—was the chief reason for S-P's shakeup at this time

Churchill, since he took over the company in 1956, had made the transition from shop-boss type to industrial boss smoothly enough. He also introduced the Lark, which pulled the company into the black. But he simply was not the wheeler-dealer that S-P's situation demanded.

Francis, who guided General Foods through its big acquisition program, fits this role. He has a reputation as a superb merchandiser and a skillful bargainer, and he brings to the job a rare amount of personal prestige.

• Sonnabend—His choice, however, is not in itself a victory for the chief critic of the acquisition program—A. M. Sonnabend, president and chairman of Botanv Industries, Inc., and a director of S-P. Sonnabend, in fact, was the only director not present when Francis was elected.

Sonnabend has been arguing that S-P is not taking full advantage of its tax-loss credit, that S-P is being too choosy about the type of company it wants to acquire. As he sees it, the tax-loss credit should be the primary motivation in looking for acquisitions, and any profit-making company (say, even a gymnasium chain) is a proper target.

Other S-P directors have a different acquisition philosophy. They agree the company must diversify if it is to prosper, but they want to enter only those areas in which S-P can contribute something.

Francis shares this view—that the taxloss is not S-P's only asset, that it is also strong in design and manufacturing.

S-P, however, may not be in a position to restrict itself to "related" companies. Francis admits that there will be a "gray zone" for a little while. (This may mean that talks with Fedders Corp. will get hotter.) Sonnabend goes further; he insists that the executive change will result in "more realistic,



CLARENCE FRANCIS, at 71, comes out of retirement to head Studebaker-Packard.

more imaginative, and sounder acquisition policies."

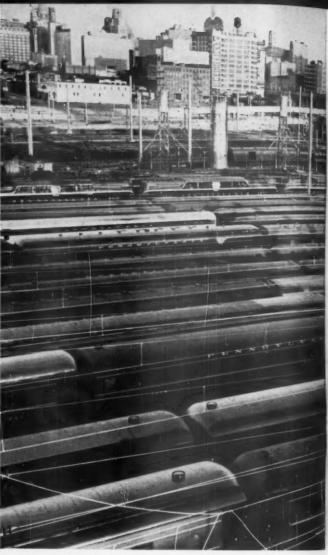
• Two-Year Profit—In any case, Sonnabend stands to profit handsomely from new acquisitions. Two years ago, he was put in charge of the acquisition program under a contract that gave him \$25,000 a year until 1963, plus options on 500,000 shares of S-P common at \$12.82 a share—exercisable at the rate of 7,500 shares for each \$1-million in pretax profits brought in by acquisition. Sonnabend was forced out a year ago in favor of Mewhort, but the contract still holds.

• Auto Business—While all agree that the acquisition program needs more push, Francis insists that S-P's auto business is basic to the company's success. For one thing, it would help merger negotiations if S-P's auto sales were on a sturdy footing; a sales slump has driven S-P's stock from \$29 to about \$12 this year. Francis says also that the auto business must succeed if S-P is to shed its reputation of on-again, off-again earnings and repeated crises.

This will take some doing. With the help of the Lark, earnings last year soared to \$28-million, but \$-P has had tough sledding this year. In the first six months, it earned only \$3.3-million, down from \$12-million for the yearago period. The company will lose money in the third quarter, and for the year as a whole it will be modestly in the black—perhaps \$4-million to \$5-million, which would come in part from its new acquisitions.

S-P directors look for only a slight improvement in auto sales next year, though they hold real hopes for a good auto year in 1962.





IN NEW YORK (above) and Philadelphia (right) the Pennsylvania RR's normally bustling stations

Strike Brings Pennsy's Customers



The nation's busiest railroad system -the Pennsylvania-was shut down this week by a strike of 20,000 of its 75,000 employers. On the 10,000 miles of the Pennsy's track, stretching through the huge Midwestern industrial belt, everything ground to a halt. But by the end of the first week of the strike the prevailing reaction from New York to Philadelphia, Chicago, and St. Louisand almost every other community serviced by the railroad-was: "So what?"

More than 700 passenger trains and 870 freight trains that normally run each day on the Pennsy didn't move. More than 50,000 loaded freight cars stood idle and untouched beyond the picket lines at hundreds of the railroad's loading points. More than 70,000 daily commuters were left without their usual trains. Thousands of factories through the East and the Midwest were left

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BUSINESS WEEK . Sept. 10, 1960





are haunts only for ubiquitous pigeons as strike halts railroad's trains (center).

Little Pain - For Now

without their normal transportation. But so far nobody is much upset.

For a week, at least, it seems that the nation's busiest railroad can shut down and yet cause little pain and not much disruption in the crowded 13-state area that it serves.

• Hardly Noticed—Philadelphia, more dependent on the Pennsylvania than any other major city along the railroad's route, braced for the worst. Rumors of food shortages, of rapid factory shutdowns, and predictions of chaotic traffic jams churned around the city last week. Philadelphia this week is eating as much as it did last week, its factories are working as hard as usual, and if its highways are more crowded than usual nobody has yet been trapped in a chaotic jam.

Chicago, served by 17 other major railroads, hardly notices the absence of the Pennsylvania. St. Louis, which gets traffic from about a dozen other railroads as well as by barge from all over the Mississippi and Ohio valleys, isn't bothered by the Pennsy shutdown.

Some 15,000 passengers usually use the Pennsy's service between New York and Washington every weekday, but bus and airlines, after putting dozens of extra pieces of equipment to work, are handling the load.

• How Industry Fared—The nation's greatest steel centers lie in the area served by the Pennsy, but their transportation troubles this week are caused not by the Pennsy strike but by strikes called against the subsidiary railroad lines of U.S. Steel Corp.

The thousands of industrial plants that the Pennsy serves got plenty of warning of the strike. It was three years in the making (BW-Sep.3'60,p94). As the deadline drew near, the railroad

warned its customers and helped many of them find alternative routes for their supplies and products by other railroads and by truck and barge lines. It wasn't a difficult task, for in the Midwest, railroads, highways, and barge canals crisscross and parallel each other for mile after mile.

Most of the companies that own those plants are immediately worried by nothing more than the added cost of shipping by roundabout routes—a total of several million dollars a day. Despite this, everybody is getting by right now.

• Pressures Ahead—How long they can last is something else again. The consensus seems to be that if the strike lasts no more than two or three weeks, the country can live fairly easily without the services of its busiest railroad. In three weeks or a month the pressures will get a lot harder, as trucklines and other railroads overtax their equipment to meet the gap left by the absence of the Pennsylvania.

Scores of companies in many dif-

ferent industries have scheduled increased production in the next month, and they're wondering now whether the alternative transportation they are using will be able to handle the increased loads.

 Danger for Autos—Ironically, the makers of trucks and automobiles those same machines that are taking over a large part of the Pennsy's freight load and that are getting the railroad's commuters to their offices—will probably be hit first and hardest.

At midweek, Chrysler Corp. cut back work at its auto assembly plants at Newark, Del., from 16 hours to 10 hours a day, and if the strike persists may drop from a five-day week to one of four or even three days. This plant gets its supplies by the Pennsy and has been unable to find any alternative.

In Cincinnati, Chevrolet truck assembly lines were back in business this week after model changover. But the plant manager says "A lot of our supplies come in by the Pennsylvania. We could be hit badly by the strike."

• This One Hurt—And to cap it all a strike far smaller than the Pennsy's—this one by 1,000 employees of the Grand Trunk Western RR—has forced the shutdown of two of Chevrolet's biggest engine plants at Flint, Mich. If the GTW remains strikebound through next week, Chevrolet says it could be in "serious trouble."

Detroit Lets Out Some 1961 Secrets

Previews of 1961 models show compacts, new and old, are getting more power and more special features.

The auto industry, now previewing its 1961 models for the press, is giving the driving public an advance glimpse of what to expect in the continuing shift to compact cars.

Specific details of many models already previewed, plus earlier forecasts (BW-Jul.16'60,p29), show that Detroit is again following a familiar strategy. Before the small car revolution, the big cars were getting longer, more powerful, and lower year by year. Now the U.S. compacts are starting to get more streamlined, revving up more and more under the hood.

In addition, the auto industry is now producing compacts under the "segmented market" theory—in other words, producing a different type of compact for each major LLS need.

for each major U.S. need.

• Five New Ones—For the 1961 model year, the auto industry will bring out at least five entirely new compact models—with possibly the addition of one or two others that now are in the design stage.

Here's how the new compacts al-

ready previewed line up:

Dodge: The compact Lancer has a 106.5-in, wheelbase and is 190 in, in over-all length. That's the same as Chrysler's Valiant. But the exteriors will be quite different.

Oldsmobile: The low-priced F-85 compact, a six-passenger car, has a

112-in. wheelbase, 188-in. over-all length, and 155 hp. It will be powered by Olds' new V-8 Rockette engine.

Studebaker-Packard: The Cruiser, a luxury compact, has a 113-in. wheelbase, and will offer either a standard

luxury compact, has a 113-in. wheelbase, and will offer either a standard V-8 engine or an optional, larger V-8. Over-all length is 179 in., compared to 175 in. for the 1960 Lark. The Cruiser's exterior styling is on the same lines as the 1960 Lark, but it sports interior luxuries such as a center folding arm rest for the rear seat.

• 1961 New Looks-Many of the old models will get new features. Here's

what drivers can look for:

General Motors: Oldsmobile will offer in the medium-price field the Dynamic 88 and Super 88; the Classic 98 is its luxury entry. Olds will have a new classis design that lets passenger seats down within the side rails of the frame. Over-all length on all models is reduced by 3.5 in. to 5.5 in., width by 3.5 in., weight by about 14 lb.

Corvair is coming out with its first station wagon, a van-type sports wagon, a panel delivery truck, and two pick-up truck models. All Chevrolet's conventional passenger models will be shorter, narrower, and lower. The Corvette sports car will be extensively restyled.

Chrysler: In addition to a restyled compact Dart, Dodge will have the Polara medium-priced series. De Soto also will be offered as one series, in four-door sedan and hardtop. The Imperial will have new front-end styling. The Valiant will be plugged as the Plymouth Valiant.

American Motors: The Rambler American, with a 100-in. wheelbase, is restyled for the first time with a roomier body. A convertible American will go on sale. AMC also has a new aluminum engine for all models, and expects to be first with a ceramic-coated exhaust system designed to last the life of the car (BW-Jun.11'60,p170).

Studebaker-Packard: The 1961 Larks will have a new six-cylinder overhead valve engine and a streamlined, lower silhouette. The new Skybolt engine, designed to develop about 112 hp., replaces a 90-hp. power plant. S-P's sports car, the Hawk, will be sold on its exclusiveness—only 6,100 will be produced.

Charges Fly

The special session of Congress, conceived in a pre-convention haze and dedicated to the proposition that it would help Democrats, wound up a big question mark as far as its impact on the Presidential campaign is concerned.

The session was more noted for what it did not do more than for what it did (chart). It did nothing at all on the big political issues of minimum wage and school construction, and it passed only token programs on housing and medical

aid to the aged.

 Do-Nothing Label—Undoubtedly the Kennedy-Johnson team, billed as the candidates who could "get things done," suffered a blow to its image of leadership. Republicans are already ridiculing the Democratic candidates for their inability to put their program through even a 2-to-1 majority in Congress.

But while Congress was still in the last throes of adjourning, Kennedy called a press conference to lambaste the "obstructionism" of the Republicans and particularly the veto threats of the President. He quoted Eisenhower's own boast that all he needed to stop legislation was "one-third plus one." One measure passed by Congress to subsidize small lead and zinc mines, for instance, met an immediate announcement from the President that he would veto it.

 Divided Blame—Actually, responsibility for stopping the major bills was divided between both parties, as the old GOP-Southern Democrat coalition took

firm control of the session.

The bill to raise minimum wages to \$1.25 and extend coverage to 4.2-million workers, stamped with Kennedy's own name, bogged down in a Senate-House conference dominated by the coalition. The conference insisted on hewing close to the more modest House bill, so Kennedy withdrew his support. He will take the issue to the voters instead.

An omnibus housing bill and school construction measures were buried by the coalition-controlled House Rules Committee. In the Senate, Southerners and border-state Democrats deserted Kennedy on his program for broad medical benefits under the Social Security system.

Both candidates promised this week

-Kennedy personally and Nixon
through Health - Education - Welfare
Secy. Arthur S. Flemming—to put the
government behind more generous welfare programs. But so far neither has
been willing to be drawn into an attack on the coalition that blocked action on such bills in the special August
session.

as Congress Accomplishes Little

BILLS PASSED	WHAT THEY PROVIDE	THEIR BACKGROUND			
Public Works	\$3.9-billion, including funds to start 23 new projects.	Eisenhower had recommended only five new projects; appropriation is \$43-million less than asked.			
Labor and HEW	\$4.3-billion.	This is \$433-million more than Eisenhower had requested. Most of the excess is for medical research.			
State, Justice	\$705-million.	This is about \$22-million less than Eisenhower had requested.			
Mutual Security	\$3.8-billion for economic and military foreign aid.	Total is more than last year but still \$400-million below request.			
Supplemental Appropriations	\$162-million for various purposes.	Includes about \$62-million of the amount originally knocked off foreign aid request.			
Special Authori- zations	\$500-million for Latin American development; \$100-million to help Chile recover from last year's earthquake.	Funds won't be appropriated until next year.			
Taxes	Allows companies that operate in more than one foreign country the option of lumping all their overseas profits and losses in figuring taxes; encourages retailer-manufacturer cooperative advertising by exempting such costs from excises at retail level; gives a tax break to sellers of mortgages to FNMA.	Major tax changes were put over to next year, when rate cuts as well as an overhaul of depreciation provisions will be a major issue.			
TV	Makes payola and the rigging of quiz shows illegal; fines up to \$10,000 for violating FCC regulations.	This is the outgrowth of scandal.			
TV	Suspends for this one Presidential year the law requiring radio or TV to give equal time to all candidates.	Waiver clears the air for Nixon-Kennedy TV debates.			
Housing	Authorizes federal insurance of home-repair loans, \$500-million of loans for college dormitories, \$50-million for community facilities.	A stopgap measure.			
Medical Care	Provides \$202-million a year in federal con- tributions to states, to help pay medical bills for old people on welfare rolls.	This is the result of inability to agree on any of the more sweeping proposals.			
Social Security	Slightly liberalizes \$1,200-a-year earning limit for recipients; provides disability payments at any age instead of after 50.	This was adopted instead of a proposed lowering of the retirement age for men to 62.			
Dairy Prices	Maintains price support levels for milk and butterfat until Mar. 31.	Balks Administration plans to reduce support level by 5%.			
Antarctic	Ratifies 12-power pact, including Russia, banning nuclear development or testing in Antarctica.	Intended to guarantee there will be no further territorial claims.			

Retailers Grab for Signs of Cheer

"With one hand on the crystal ball and the other on the Bible, I'm predicting that we'll probably break even

with last year."

That observation by the manager of a big Los Angeles department store is a shade less optimistic than most of the U.S. merchants talked to by BUSINESS WEEK reporters as this year's fall buying season begins with back-to-school promotions. But it graphically illustrates the uncertainty with which re-



tailers enter the year's biggest selling

The uncertainty partly stems from the talk of recession, the low rate of steel production, and a summer that almost everybody admits was pleasant enough as far as the weather was concerned but far from relaxing to store operators.

As one retailer put it: "In June and

July, we took a bath.

· Cotton Crop-August saw a pickup in most parts of the country, which is enough to give retailers happy thoughts about fall and winter. In fact, in some cities there is an almost boomlike quality to merchants' comments. Memphis stores, for instance, are experiencing a boomlet in luxury goods. A hot, dry summer which saps the appetite of boll weevils promises a good cotton crop in the lush Mississippi delta country-and the plantation owners are expressing their good luck by opening up pocketbooks.

"Particularly there has been an upturn in large diamond goods," said one merchant whose diamonds range in price from \$100 to \$22,000. The owner of a luxury women's shop reports that business is 37% ahead of last

Hawaiian merchants, too, are shouting boom, with even hardgoods that in most other places are a drag on the market registering important gains.

One retailer gloated a little: "The socalled softening on the mainland from March through the summer hasn't hit us yet. In fact, we've been helped by it. We're able to capitalize on the manufacturers' price-cutting."

Otherwise, though, the nation's retailers are cutting back on earlier predictions of just how much 1960 would top 1959 in sales. A New York store with a lot of branches says June and July were rough, but August improved something more than 11% over last year, and the year as a whole should see a small percentage gain. But he reminds you that last August was a terrible business month, and this August had one more shopping day accounting for about 4% of the year-to-year gain. So that the recent gains may be a false indicator. In Salt Lake City, the smart store operators report gains so far of 1% or 2%, while the marginal stores are reported to be seriously behind last vear's figures.

· Strange Animal-"Just say the customer has us puzzled," reported one retailer. "He is a strange animal these days. He has more money, shops around more, bargains harder, but generally is spending less than we expected."

Says an Atlanta report: "The consumer is cov, and the merchants are nervous."

What's more, says a New Yorker, transactions-the number of individual sales-are off so far this year even though volume is up, thanks partly to higher

Back-to-school buying, which has started in most parts of the country, is generally reported to be fair to good. Boys' wear is much better than usual, say some stores. In fact, one merchant called it the best in five years.





Some merchants are banking on the large teen-age crop of children entering junior and senior high schools for the first time. "It's the war babies who are now becoming style conscious," commented a Western merchant.

Among teen-age boys, the trend is still to Ivv League styles. Girls are buying all over the lot. If there is a trend



it is to cordurov, whether it is shirts, suits, slacks, or whatever.

· Sprucing Up-Most of all, says a big chain, which has been sharply upgrading its quality of merchandise, "for the first time in years, the trend is away from jeans to sharper looking slacks. Kids are dressing up more.'

As for color, it's a purple-or, as the stylists say, a plum-year for the girls. For boys and girls both, gold is a big seller. Olive is the matching color for

As back-to-school buying wanes, there is concern that the August-September pickup in buving over a dull and listless



All the Talk's about Sinclair Petrochemicals

Sinclair's continuing petrochemical progress was a prime topic of conversation at the Company's annual meeting of stockholders this year.

- The volume of chemical sales in 1959 doubled that of the previous year, and the 1960 volume to date is even better.
- Sinclair is now the largest producer of paraxylene, the basic raw material for polyester fibers used in the popular wash-and-wear fabrics.
- Sales of the plastic raw material, high purity propylene, first made in this country by Sinclair, are at an all-time high.
- · In a joint undertaking with Koppers Company,

Inc., a major plant is being built at Houston, Texas to produce styrene monomer, a synthetic rubber and plastics raw material.

Stockholders were told that this rapidly expanding field is "an excellent route for product diversification, and an important new source of profits".



A Great Name in Oil



summer is nothing more than a reaction to hefty promotions.

In Denver, for instance, a merchandiser of one of the two biggest stores commented: "There are no indications of a surge in buying, and it's tough to make last year's figures." Said another: "We've been in a dog-fight all summer and I don't think fall will make much differente. Customer leeriness has settled by now into a state of mind." Cleveland stores, which staged a mammoth Downtown Days promotion, saw sales spurt, but they aren't convinced it was a permanent gain. Shoppers, the merchants say, aren't reluctant; they are just not full of pep.

• Anti-Debt—A leading Hartford merchant analyzes the customers; he figures they are bargain-conscious but also hesitant about going into debt on big ticket items. A lot of his store traffic, he says, is "just looking."

A Philadelphia merchant agrees: "People aren't reluctant to spend on softgoods, but they are reluctant to spend on durable goods." As a result total volume in the city is just running



even with 1959, according to the Federal Reserve Board figures, despite fairly good gains in softgoods.

Actually, not every merchant reports slow sales of hardgoods. Even in Philadelphia a couple of furniture stores reported gains over last year with customers going for higher priced lines. In a Midwest Sears, Roebuck store the manager reported selling 400 refrigerators this summer.

For the most part these represent isolated cases. Most stores say the sharp slump in consumer durables has eased off, but that sales are still slow.

• Cagey Buying—The continued refusal of consumers to splurge has also turned the merchants themselves into hesitant buyers. Almost all of them say that they are following a strict policy of buying as close to the ultimate retail sale as possible,



Detroit retailers are continuing their cautious ways of buying—not because they're afraid of the future, they say, but out of respect for the economic unpredictability of this one-industry area. With supplies plentiful for quick delivery, they can play it this way without loss of sales.

"We expect a 10% sales increase in the fourth quarter," says a Detroit merchant, "but we're ordering as though sales will be no better than a year ago, because we can shoot through requests for that extra 10% in a hurry."

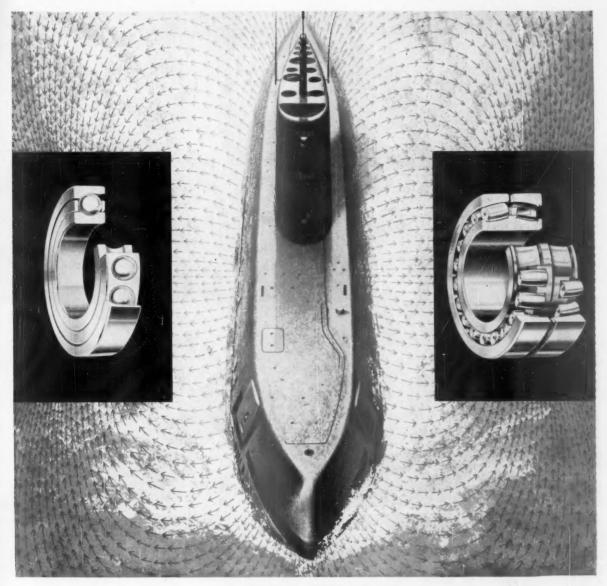
This cautious inventory policy has been endemic among retailers for the past two years, ever since they got a bad scare in 1958. But a Los Angeles retailer says that at the moment inventories are higher than last year as a result of the June and July lag and so "we are playing it real tight."

Looking far ahead, a retailer predicts: "On Dec. 12, all the merchants will be screaming their heads off-forgetting that Christmas is two days later this year as far as shopping goes. In the end, it'll be the biggest Christmas ever."









MEETING THE NEED FOR NON-MAGNETIC AND NON-CORROSIVE BEARINGS

Working with many materials — Monel, Beryllium Copper, 440-C Stainless Steel and Cobalt Alloys — Torrington is continually developing higher capacities and longer life in anti-friction bearings for unusually demanding applications. Many of these applications call for non-magnetic or non-corrosive properties — and often both in the same bearing.

For example, in submarine rudder posts and instruments, good bearing performance often depends as much on corrosion and magnetic resistance as on the load-carrying capacity. In sensitive electronic equipment, valves and other mechanical applications, special metals may be necessary to eliminate undesirable magnetic effects.

Designing and manufacturing bearings to meet unusual requirements is a Torrington specialty. Developments in non-magnetic and corrosion-resistant bearings are a part of Torrington's continuing effort to improve bearings in design, metallurgy and performance.

THE TORRINGTON COMPANY

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PROGRESS THROUGH PRECISION-IN BEARING DESIGN AND PERFORMANCE



Three good customers, a supplier, and an anxious wife tried to reach this man in vain while he used his telephone for the inside call pictured above.

When a company relies on the telephone for both outside AND INSIDE communication, key people cannot be reached 1/4 to 1/3 of the time.

This is costly!

Add a separate inside communications channel...an Executone Intercom and Sound System...and key people can always be reached. Immediately, you receive at least six benefits:

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- 2. LOCATE EXECUTIVES: In addition, from ½ to ½ of key people are "away from their desk" during busy hours. Not available. With courteous, modulated Executone paging, important messages reach them. They're always available for the important jobs!
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COMMUNICATION and SOUND SYSTEMS	CityState.	-4-

In Business

Bankers Trust, County Trust to Merge In First Move Across N.Y. County Lines

The banking situation in New York State blew wide open this week. Bankers Trust Co., the nation's eighth largest with \$2.8-billion in deposits, announced plans to merge—through a bank holding company—with the County Trust Co. (\$449-million in deposits, and 56th in size) of suburban Westchester County.

The move, which gives Bankers Trust 40 additional offices in the lush Westchester market, is the first major acquisition by a New York City bank since the state I gislature authorized branching across county lines last

winter (BW-Mar.26'60,p32).

Other city banks plan to set up branch systems of their own in the suburbs. It amounts to a substantial shift in the balance of competitive power among the giant New York banks that dominate lending to big business.

The decision of the County Trust to join with Bankers amounts to a major coup. County Trust had previously approached the altar with First National City Bank—third largest in the nation, and almost twice Bankers' size. But this move—which would have resulted in a similar bank holding company combination—was rebuffed by the Federal Reserve Board, on the grounds that banking competition in Westchester would suffer.

It is certain that Bankers' expansion will set off other merger moves among the big city banks, aimed at redressing the balance of power. In a reverse move, Meadowbrook National Bank of Long Island, second largest in Nassau County (\$420-million in deposits), moved into the city this week by buying two banks.

GE, Westinghouse Offers Spurned By Unions But Peace Hopes Survive

Unions have rejected as "inadequate" contract offers by General Electric and Westinghouse. Bargaining is moving toward October contract deadlines. Strike threats will be heard at conventions of the International Union of Electrical Workers in Miami Beach and of the United Electrical Workers in Atlantic City, both next week.

However, strikes are far from certain despite an apparent impasse in negotiations this week. Unions feel that walkouts would be poorly timed now.

Massachusetts O.K.'s Tax Concessions Demanded by Pru on Boston Project

Prudential Center, \$200-million construction project in Boston's Back Bay, finally got a clear go-ahead this week. Gov. Foster Furcolo of Massachusetts signed a series of bills that give the Prudential Insurance Co. the tax concessions it claimed it had to have to build the buge complex

The concessions provide that Pru make payments over the next seven years on a sliding scale rising from \$150,000 to \$2.6-million. After that, it will pay not less than \$3-million a year. Still, Pru finds the deal viable, since it will never have to pay more than 20% of gross income from the center.

Earlier, the insurance company had threatened to wash its hands of the nearly \$15-million it had already sunk in the property and give up the whole thing. That threat came after Boston real estate men had challenged tax concessions that Pru had informally negotiated with Boston authorities (BW-Jun.11'60,p96).

Toy Wholesalers, Makers of Staples Assailed by FTC on Sales Practices

The Federal Trade Commission this week leveled its guns on one group of toy wholesalers, signed a consent order with a second group, and opened fire on two of the largest makers of industrial staples.

 FTC accused ATD Catalogues, Inc., a New York City association of toy wholesalers, and 22 member companies of knowingly inducing discriminatory promotional

allowances from suppliers.

- March of Toys, Inc., signed a consent order barring it from knowingly inducing price discriminations from suppliers. FTC said the association received unlawful discounts ranging from 2% to 5% from toy makers.
- FTC accused Container Stapling Corp. and International Staple & Machine Co. of exclusive dealing contracts with independent distributors and dealers. Both companies are based in Herrin, Ill.

The Battle Over Old Films

The Justice Dept. has decided not to appeal a federal court ruling that absolved Columbia Pictures Corp., its subsidiary Screen Gems, Inc., and Universal Pictures Co. on charges of violating the antitrust laws in acquiring pre-1948 films for use on television.

However, the antitrusters say their decision was based on technicalities; the basic principles behind the suit will be pursued in a similar case pending in the New York district court. In the second case, United Artists Corp. and a subsidiary are accused of antitrust violations in acquiring from existing competition some 1,500 pre-1950 films of Warner Bros. and RKO-Radio Pictures, Inc.

The bread industry has been accused by the Kefauver antitrust subcommittee of price discrimination, "oppressive" promotional policies, and other monopolistic practices. A committee report, based on 1959 hearings, says these practices have promoted concentration and eliminated real price competition.

The committee, which has also investigated pricing in steel, autos, and drugs, this week resumed its hearings

on the drug industry.



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WASHINGTON OUTLOOK

WASHINGTON BUREAU SEPT. 10, 1960



Turnabout in the makeup of major regulatory agencies is a distinct possibility within the next 12 months.

Senate refusal to confirm several Eisenhower choices creates this political bonus for the incoming President, whether he be Democrat John F. Kennedy or Republican Richard M. Nixon.

Under Kennedy appointees, sharper changes would be expected in agency attitudes. This would directly influence the economic atmosphere through the impact of federal regulation.

The reason was never stated explicitly, but it is clear that the Senate balked at some of the Eisenhower appointments with deliberate intent to create a situation in which Democrats could quickly get political control over the regulators if they won in November.

One key spot: the National Labor Relations Board.

A pro-labor majority by next August is possible—and, it's virtually certain if Kennedy wins the Presidency.

The new President will appoint one new member immediately on taking office next January. This stems from the Senate Labor Committee's refusal to act on Pres. Eisenhower's nomination of Republican Arthur A. Kimball for a five-year term to succeed Stephen Bean, also a Republican.

Another NLRB vacancy occurs next August, when the term of Democrat Joseph A. Jenkins expires. Jenkins is an Eisenhower appointee.

The present five-man board is considered pro-management in attitude and general outlook. Only one of the five members, Democrat John H. Fanning, has tended consistently to side with labor in major NLRB interpretations of labor law.

Two new pro-labor commissioners would change the balance, setting up a majority for the so-called "Fanning attitude." The leadership of most of organized labor, now allied with Kennedy in the Presidential race, will certainly be consulted on the NLRB appointments if the Democrat wins.

Immediate changes could occur in control of some other agencies. This springs both from the Senate refusal to act on several Eisenhower nominations and from early, routine expiration of some members' terms. Among them:

The Federal Trade Commission. Republican Chmn. Earl W. Kintner was denied Senate confirmation for a new seven-year term. The FTC division is three Republicans, two Democrats. If Nixon wins, Kintner likely will be reappointed—and confirmed. If Kennedy wins, he could rearrange the political balance immediately by putting a Democrat into the Kintner spot. Until January, at least, Kintner continues on an interim basis.

The Civil Aeronautics Board. At CAB, now 3 to 2 Republican, GOP member John S. Bragdon's term expires at the end of this December. A new President will be able to appoint a CAB "swing man" at once.

The Interstate Commerce Commission. Two vacancies will greet the incoming President in January. One is caused by the Senate's refusal to confirm Timothy J. Murphy of Boston, a nominal Democrat suspected by influential senators of being a voting Republican. The second will occur Dec. 31 when Chmn. John Winchell's term expires.

WASHINGTON OUTLOOK (Continued)

WASHINGTON BUREAU SEPT. 10, 1960 sible by next summer. The new Chief Executive will be able to appoint two men to the five-member FPC at once, because the Senate did not confirm Eisenhower nominees Paul A. Sweeney and Thomas J. Donegan. Then in June, the term of Commissioner Arthur Kline expires.

Thus, in the space of six months, a new President will be able to install an entire new majority in this agency, which regulates the natural gas and electric utility industries. Naturally, the party in control of the White House will insist on a numerical majority of the FPC members. But the FPC situation illuminates two more basic facts—appointments to regulatory agencies are vital, if seldom mentioned, election prizes, and the philosophy of the regulators is much more important than their political party affiliation.

Kennedy picks the major battlegrounds for his Presidential bid.

He cited California, the industrial North and East as make-or-break territory for the Democrats in 1960. Kennedy picked out New York, Pennsylvania, Ohio, Michigan, and Illinois along with California, Nixon's home state, as spots where the most money must be spent in the campaign.

This means some downgrading, but not abandonment, of Kennedy's personal efforts in the Deep South and, to a lesser degree, in the agricultural Midwest.

One encouraging note for Kennedy: The drive to register voters in the key big states is, according to most reports, bringing in new Democrats at about a 2-to-1 ratio over new Republicans.

New problems for Kennedy crop up, however, to compound his task even before the campaign gets out of its infancy.

He appears to be far behind in California. West Coast reports say the nominee's young brother, Teddy Kennedy, has alienated several powerful West Coast Democrats who show their pique by inactivity. The Adlai Stevenson clique, potent in California, is up in arms because Kennedy refuses to guarantee that their hero would be his Secretary of State.

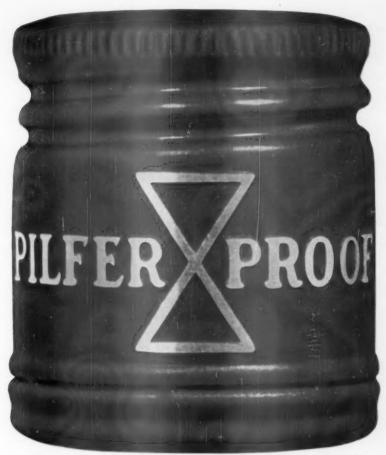
Democratic platform trouble breaks out in several places. Sen. George A. Smathers of Florida, the campaign director for the South, maps a Dixie operation that will ignore platform pledges on civil rights. Rep. Francis E. Walter, a Pennsylvania Democrat, publicly attacks the pledge of more liberal immigration policies. Smathers and Texas congressmen try to convince skeptical Southwestern oilmen that the platform does not really pose a threat to the $27\frac{1}{2}\%$ depletion allowance.

A Nixon program for social welfare action is spelled out in fairly concise terms by one of the Vice-President's political confidentes, Secy. Arthur Flemming of Health, Education & Welfare.

Some of the things Nixon would back, according to Flemming: (1) more aid for the aged, including help in buying health insurance; (2) another rise in the earnings limit imposed on Social Security recipients and higher Social Security payments to widows; (3) federal educational scholarships based on merit and need; (4) general liberalization of public welfare payments; (5) tax credits or deductions to cover tuition costs borne by parents of college and university students.

Clearly the list was made with Nixon's blessing and knowledge.

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Looking on during spectrographic oil tests at P.R.R. Testing Laboratory are (left) M. A. Pinney, Engineer of Tests, Pennsylvania Railroad, and C. D. Gilchrist, Gulf Sales Engineer. Thousands of tests like this, over a period of years, confirmed the acceptability of Gulf Dieselmotive 79 oil.





Tougher Going for Credit Cards

The credit card companies have to build volume to keep their operations profitable.

But, with the executive market largely tapped, they are finding it harder to recruit new members.

And delinquencies in payments are rising sharply.

The credit card industry, which has made a fair bid to make cash obsolete in the U.S., is continuing to have

severe growing pains:

• Diners' Club, largest of the card plans in terms of members (1.1-million) and volume (over \$165-million annually), has seen its growth in profits stall, in part because of heavy advertising expenses.

 American Express Co. has built an annual charge volume on its credit card of "well over \$100-million" in less than two years of operation and claims 750,000 members, but it is still losing money. Startup costs are the big factor hurting its credit card operation.

• Hilton Credit Corp.'s Carte Blanche reported a loss of \$2.4-million for its first full year of operation, including at least \$800,000 in bad debt expense. Carte Blanche, which says it has about 400,000 members who have paid for their cards, claims that charges are now running at the rate of about \$110-million annually.

The credit card companies' profit problems grow out of the fundamental nature of the credit card business. Basically, the credit card is a natural for the businessman. It exists for convenience in keeping tax records, in the elimination of the need to carry cash, in providing single billing, not for the purpose of credit extension, though credit is granted when a card is used. As one observer says, "If you need to borrow, you shouldn't get a credit card."

• Basic Problem—But the credit card companies, with their big investment in business machines for billing and accounting, need a mass operation in order to make money. In the early days, when Diners' was just beginning to open up its market, it grew at the rate of 40% a year—in volume of charges, in members, and in profits.

But now the cream has been skimmed off the top; much of the corporate executive, high-income bracket market has been tapped.

As a result, to build the volume it needs for profitable operations, Diners' and its newer competitors have been dropping lower down the economic ladder. These accounts are harder and

more expensive to acquire and are more expensive to maintain.

The credit card companies already have had a major shakeout. There are only three major plans that are not controlled by a bank or finance company—Diners', Amex, and Hilton—compared to over a dozen two years ago. There is talk in the industry of a further reduction in the ranks, possibly through merger.

• Competitive Pressure—Banks, whose rush into new consumer credit plans last year helped put pressure on card outfits (BW—Mar.7'59,p55), also are complaining about the narrow profit margins on their consumer credit business. A few banks are even pulling out of the credit plans that were started only last year (page 50).

But over the long pull, it's likely that the banks and finance companies will regain some lost territory.

Seaboard Finance Co., for example, says that its International Charge Plan—started only a year ago—now has 1.5-million members and predicts that charge volume could run as high as \$200-million next year.

 Delinquency Problem—But the most pressing problem for credit card companies is delinquency, which is rising sharply.

This is partly the result of inexperience and partly competitive pressures.

Hilton Credit Corp.'s credit director, Joseph Tilem, admits that when the company conceived the idea of the Carte Blanche, it made an unfortunate oversight—it forgot the credit angle. New accounts weren't processed carefully, and the company lacked adequate credit-checking in the stores where the credit was being extended.

Hilton officials say that new controls have been adopted, and that during May, June, and July the company actually showed a profit of \$116,000. But this improvement, Tilem says, is more the result of cost cutting in operations than a reduction in delinquency.

Tilem says that there's an increasing tendency for credit card holders to "kite" credit through their credit cards. Studies have shown, he says, that 75% of credit card holders have more than

one card. Tilem claims that many of the delinquents are using Diners' one month, Carte Blanche the next, and Amex, the following month. By stalling first one company and then another, the card holder can postpone a long time his day of reckoning, when he has to pay up or be sued.

Tilem, who formerly worked for Diners' Club, says that over half of the Carte Blanche delinquents are behind in payments to Diners' as well. He also says that the percentage of accounts receivable that are delinquent is very close for the three major credit card companies. But none of them will say what that percentage is.

Diners' Club and American Express both deny delinquency is a "problem." On the contrary, Amex says that its problems have been in the operating area, involving conversion from a manual accounting system to an automated IBM system. "For a while," says Amex Vice-Pres. Clark B. Winter, "we weren't even getting all our bills mailed out on time."

• Weeding Out-But Amex and Diners' do admit that they have had to do extensive "weeding of their accounts," to eliminate bad credit risks. Both companies expanded rapidly in late 1958 and early 1959 by acquiring other credit plans. Card holders from other credit plans were taken into Diners' and Amex en masse-with no additional credit checks. "A lot of those people," says Winter, "couldn't get within a mile of an Amex card today."

All three credit card operators are hitting hard at any attempts at fraud with credit cards. Hilton, for example, has installed a camera system that takes a photo of anyone cashing a check who uses a Carte Blanche for identification. Previously, losses from checks cashed by thieves with stolen cards had been substantial

• Lack of Cooperation—Actually, credit card men are less worried about frauds than they are about delinquencies. In this area, credit men say that cooperation in credit investigations between the card companies is needed before there's going to be any real reduction in delinquency. Such a cooperative arrangement, they say, would put an end to credit "kiting," and would prevent card holders from running up bigger charges with two or three different cards than they can afford to pay.

"The lack of cooperation in this competitive industry is fantastic," says Tilem. "The card companies must learn," he adds, "they have to cooperate to cut down misuse."

In Finance

In Struggle for B&O, Both C&O And New York Central Face Defeat

The battle between the New York Central and the Chesapeake & Ohio for control of the Baltimore & Ohio has shifted out of the cloak-and-dagger phase (BW-Aug. 13'60,p27) and is now getting more like a musical comedy. The script, though, is by no means set, and many Wall Street analysts think neither bid for the B&O will be successful. They expect the whole deal will flop.

At last count, with only a week remaining before the C&O's offer to B&O stockholders expires on Sept. 12, the C&O had collected only a little more than 10% of B&O stock and the Central, whose offer expires on

Sept. 26, had only about 7%.

The Central and the C&O have hundreds of men at work in the U.S. soliciting B&O stockholders. But for most of the last month, the spotlight has been on the railroads' attempts to win the favor of the three major Swiss banks that are nominees for some 10,000 Swiss who hold about 17% of the B&O's stock.

The first result of hurried trips to Switzerland by the contending railroads' managements was a recommendation from the three banks that B&O holders take the C&O's bid. After this news leaked out, the Central's Pres. Alfred Perlman dashed to Zurich and returned with the announcement that the Swiss banks were now "neutral." But the bankers replied that they had not withdrawn their first recommendation.

Shares of Perfect Photo, Inc., Change Hands at Half-Price

A group of Wall Street investment houses—reportedly including Tri-Continental Financial Corp. and Brown Bros. Harriman & Co.— has pulled off one of the neatest coups in recent years. The group picked up 51,600 shares of Perfect Photo, Inc., for \$20 a share at a time when Perfect Photo was trading over \$50. At current prices, the syndicate could make about \$1.8-million—assuming it sold all the shares.

Here's the deal: Up to July 27, the controlling interest in Perfect Photo, a Philadelphia photo finishing operation with \$15-million in sales annually, was held by the company's founder, Karl Hope. But on that day Hope sold all his 206,400 shares to Harriman Ripley & Co., a New York investment banking firm, Tri-Continental Financial, Brown Bros., and some other investors, for \$4-million—approximately \$20 per share. Harriman Ripley and associates immediately turned around and optioned 75% of this stock—154,800 shares—also at \$20 per share, to Karl Hope's younger brother, Henry, executive vice-president of Perfect Photo, and two other top officers (PP was first sold to the public at \$14 last October).

Karl Hope's decision to sell was prompted by personal estate tax problems common to many successful corporate

executives—and his desire to give his brother and other PP officers a substantial stake in the company on advantageous terms. If Hope had attempted to transfer the stock directly to his brother at less than the market price, there would have been steep federal gift taxes to pay.

By using the Harriman Ripley syndicate as a middleman, this problem was avoided. Harriman Ripley will hold the 154,800 shares for at least six months; then Henry Hope and the two PP officers plan to exercise their

option.

Harriman Ripley makes little direct profit on this deal but has now taken over from Drexel & Co., a Philadelphia firm, as PP's investment banker. Its first underwriting will be a \$4.5-million convertible debenture issue later this month. The investment syndicate, which "banked" the deal by putting up the cash required, gets to hold the 51,600 PP shares for long-term investment.

Charge Cards Find New Critics As Twin City Banks Sell Their Plans

More evidence is piling up that many bankers are disenchanted with charge cards (page 49). Four Twin City banks—First National Bank of Minneapolis, First National Bank of St. Paul, Northwestern National Bank of St. Paul—have sold their charge card plans to Shoppers' Charge Service, a subsidiary of Economy Finance, Inc., an Indianapolis sales finance outfit.

The four plans—including about 2,400 stores and some 100,000 customers accounts—were initiated only 15 months ago, but the banks found the competition too stiff. One big drawback was that large department stores, gas stations, and other firms that had their own credit systems failed to join up. Smaller merchants also complained that the various plans forced them to maintain

duplicate facilities.

Phillips and Sunray Oil in Deal For Working Control of Pacific Pete

Competitive pressure is continuing to shake up the oil industry. Last week, Phillips Petroleum Co. and Sunray Oil Co., a subsidiary of Sunray Mid-Continent Oil Co., agreed to sell all their Canadian oil and gas reserves to Pacific Petroleum, Ltd., for 6.6-million shares of Pacific Pete common stock, worth, at current market prices, more than \$80-million.

Assuming that stockholders and regulatory authorities approve, the deal will mean that Phillips will take over what amounts to working control of Pacific Pete, with 39% of its 15-million outstanding common shares; Sunray

will have 5.8%.

Phillips already has joint interests with Pacific Pete in marketing and refining in Western Canada. There have been rumors among oilmen that Phillips was concerned over Pacific Pete's recent losses—\$3.9-million in fiscal 1959, \$4.3-million in 1958. Phillips denies this, but a company spokesman admits that it intends to take "an active management interest in Pacific Petroleum."

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Modernistic Homes Catch on - But G

Costs and financing hazards help keep market for ultramodern houses small, but architects see a change coming.

Most well-heeled Americans make sure they breathe the 20th Century from sun-up to sunset—in everything from modular offices in stark, metalclad skyscrapers to radar-equipped cabin cruisers for leisure hours.

But when it comes to nighttime and the houses they live in, most aren't quite ready for the domestic counterpart the 20th Century has produced—the kind of houses you see in the pictures.

Today in the U.S., what the more zealous architects call "the true contemporary" house—or, more cryptically, "custom-designed modern"— is about where the imported European sports car was a decade ago. It's an adventure of the avant-garde.

Yet it's catching on more and more in some areas, especially in the less tradition-bound West, and its future looks bright and promising. Some businessmen are casting a curious eye on its possibilities as a symbol of distinction—but are finding that it presents its own special financial problems along with its artistic and domestic challenge.

• Difference—For there's one difference between today's "contemporary" house and the European sports car of a decade ago. Not only are the people not quite ready for the product, but the product may not be ready for the people.

In fact, it's a bit difficult to pin down exactly what the product is, since a precise definition of "contemporary" is

hard to come by. It's not only that words like contemporary, or modern, or the slightly scornful ultramodern may not mean quite the same thing everywhere.

It's also that the contemporary of 1960 derives from two somewhat divergent schools (BW-Jul.16'60,p129)—the more romantic, close-to-nature approach of the late Frank Lloyd Wright, stressing dramatic visual appeal, and the more formal, geometric style of Chicago's 74-year-old Ludwig Mies van der Rohe, one of the world's elder statesmen of architecture.

Besides that, many 1960 contemporary architects make a point of starting each house as an individual project, without any preconceived style concept.

Yet with all this divergence, today's contemporary style does have some distinguishing characteristics—simple,





HOUSE ADAPTED TO SITE—one of key tenets of modernism—makes dramatic effect in Hawaii, where climate and cost advantage give style its biggest boost.

ACCENT ON NATURE in one of "contemporary" schools has this family almost picnicking in woods in house designed by David Henken in a New York suburb.

Gain Is Slim

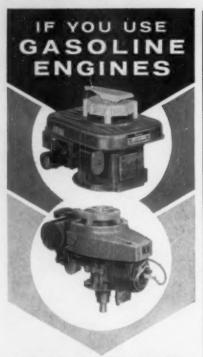
"clean" lines without traditional decorative devices; extensive use of natural wood, glass, stone, and a search for dramatic effect in their use; adaptation of the building to its site.

Even more, the style—at its best—is characterized by its guiding purpose—what its practitioners proclaim as building for "modes of modern living." The whole is designed mostly for informal living—usually without formal dining or living rooms. And it's built around "activity," tailored to the special activities of the family concerned, with space as needed for children's playrooms, for active hobbies, for built-in hi-fi sets, and the like.

• Tiny, but Gaining—Though its practitioners optimistically envisage a vigorous flowering of this advanced modernism in the 1960s, in most sections of the country it still commands the seri-

GLASS WALL lets Victor Christ-Janer look right into house he designed in suburban New Canaan, Coun.; its more severe, classic lines permit use of traditional furniture.





HERE ARE THREE GOOD REASONS TO STANDARDIZE ON TECUMSEH

• ADVANCED ENGINEERING

The proof is in the long and impressive list of Tecumseh "firsts" in this field. Constant refinement of engine-design provides better performance—at lower cost—for the nation's leading equipment manufacturers and their customers.

• PROVED PRODUCTION

Innovations in production techniques have earned Tecumseh an enviable reputation through the years. Dedicated craftsmen and exacting standards of inspection also contribute to the superior quality of Tecumseh engines.

• MATCHLESS SERVICE

At the factories or in the field, Tecumseh service rates highest. Over 8,000 Service Stations—around the corner and around the world—cater to customer satisfaction. That's why sales of Tecumseh engines show the healthiest growth in the industry.



Tecumseh, Michigan

Tecumseh is also the world's largest manufacturer of compressors for the air-conditioning and refrigeration industry.

ous attention of only about 1% of new home buyers.

This slim figure goes up to maybe 10% or even higher in certain special areas, such as greater Miami, Houston, Phoenix, San Francisco, Hawaii, and perhaps a few Northern surburban communities—areas where climate, or the absence of architectural tradition, or an unusual freedom of spirit, or all three together favor a modernist growth.

"You can't say that contemporary has had much serious impact yet," says New York's Philip Johnson, a top U.S. architect. "But it's steadily gaining, just as traditional houses are slowly dying."

Most architects at all interested in creating such houses—an estimated 25% to 30% of the profession—agree. Even in the Deep South, least affected by the new style, some see a beginning change.

"We'll soon be doing more and more contemporary town houses, built on small city lots," says Atlanta architect Henry Norris. He adds: "We're running out of architects who can design really good traditional houses."

I. Financial Hazards

Will upper-bracket home buvers go for the "contemporary" architects' conception of modern living and the modern house it needs to thrive in—as business, for example, has embraced contemporary art in its offices (BW—Mar.26'60,p30)?

There are many hazards in the way. Some real estate men take an earthier view of the modern style's future than do the architects. Edward Ives, Greenwich (Conn.) realtor handling high-bracket properties in his posh neighborhood, sums up this more pragmatic viewpoint: "Contemporaries don't sell in this section today mostly because they don't fit in with what's here."

Many other realtors find that people in "traditional" neighborhoods are apt to put up some pretty overt resistance to the occasional modernistic intruder. This can mean town-level opposition.

The resistance may come from the prospective customer, too, who may find the new breed of house sterile, unemotional, even repellent. The wife of a Cincinnati executive says, "We looked at a house the architect had done. It had every practical feature I'd ever dreamed of—even big enough closets. But it was impersonal; even the children's room was cold. So we backed down on strict modern."

 Dollars and Cents—But not all the hazards on the ultramodern road are of an artistic or psychological nature. Even the contemporary-minded and adventurous buyer may find some dollar-andcents drawbacks.

The resale status of a contemporary house is usually doubtful. Architectbuilder David Henken, who operates out of Pleasantville in New York's suburban Westchester County, thinks this a prime problem. "Not only is demand limited to a small and, I think, advanced group," he says, "but they know it's a custom-design concept—and they want their own, not a house created for another family."

There may be other reasons. One businessman settled for a modified Dutch colonial in Ridgewood, N. J., after looking at several \$60,000-plus contemporaries in the area. He and his wife got a terrific lift from one very dramatic glass and wood affair—"but then we began to spot things like 8-ft.-square windows, up high off the floor, that you'd never wash, and natural wood that looked weatherbeaten after only a few years."

Financial troubles at local lending agencies may be one result of the poor odds on profitable resale—even in such places as San Francisco, where advanced modern gets a relatively good reception. Architect Henry Hill, a leading California designer in the style, complains that conservative lenders frequently use outdated Eastern appraisal standards.

Yet there's a prospect of an increasingly warm reception financially. Even now, Houston and Phoenix, for example, report ready mortgages for moderns.

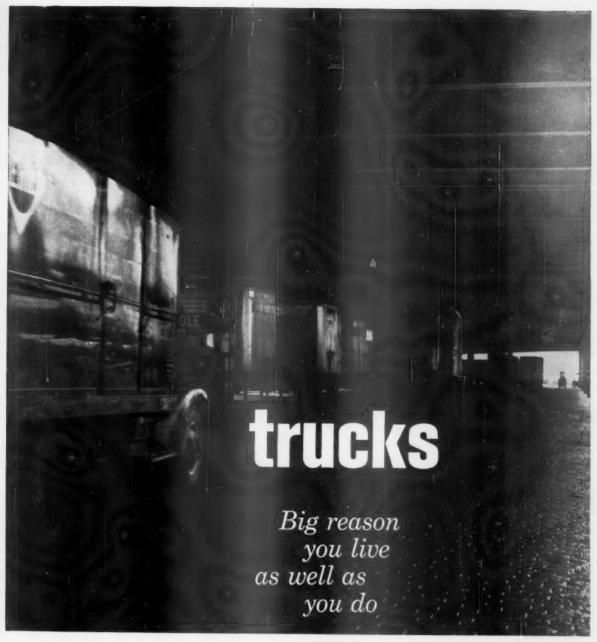
Costs for a modern-style house may come higher than for a traditional one that's also architect-designed—though there's much local variation. About half the architects, builders, and real estate dealers questioned by BUSINESS WEEK in a nationwide survey put the cost per sq. ft. at about the same figure for both styles. They put the range at \$15 (in such places as Hawaii, where labor is cheaper) to \$30 per sq. ft., with an average around \$20.

The other half, though, say materials and construction costs go up somewhat for the ultramoderns. They put the premium for modernity anywhere from 10% (the estimate of Donald Buhler, Los Angeles building contractor specializing in the style) to 20% (that of Westchester County's David Henken). Modern comes higher, they say, because "contemporary takes more skilled workmanship—for one thing, the lines have to be cleaner," and because of the absence of standardized components. The architect's fee, of course, is the same regardless of style.

Naturally, an architect-designed contemporary costs more—at least 30% to 50% more, room for room—than the average run-of-the mill house built for the market on a speculation basis.

New York's Philip Johnson sees at least a moderate cost break coming in the next five or 10 years. "Today, though," he says, "you can't do a really top quality contemporary for a family of five for much under \$80,000."

A number of architects, realtors, and



It's night now, and most of the great, darkened city is asleep. But not all of it.

Because tomorrow morning, when you're getting ready for another day, a lot of things will have to be ready for you. Fresh milk and eggs. Your morning newspaper. Fuel to heat your home and a million others. Raw materials for industries, goods to stock stores, office supplies to keep commerce running smoothly.

How will they all get where they're needed, when the city needs them?

Trucks handle a big part of the job. In fact, everything you eat, wear or use takes a ride in a truck, somewhere along the line. It's a big responsibility—not only for the men who operate the trucks, but for the folks who supply the equipment to help keep them rolling.

Tomorrow morning, while you're reading the newspaper, you probably won't be thinking about the truck that brought it to you. It's one of many things we take for granted. But if the paper hadn't been delivered . . .?



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transistor

Pulling, pushing, nudging—the tiny tug firmly controls the giant liner.

The tug has an electronic counterpart in the hardworking transistor. It too, applies a small, controlling force (an electronic current) to a large one.

In this process the large current becomes a magnified "copy" of the small one. Result: amplification. Hughes engineers, applying this principle, have developed transistors which amplify as much as 40,000 times!

To translate this advanced transistor research into practical form, Hughes has invested millions of dollars in an ultra-modern semiconductor facility.

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Examples of these new developments include advanced computers and space-ranging satellites. In fact, Hughes transistors and their "sister" semiconductors, the diodes, are aboard satellites now exploring space.

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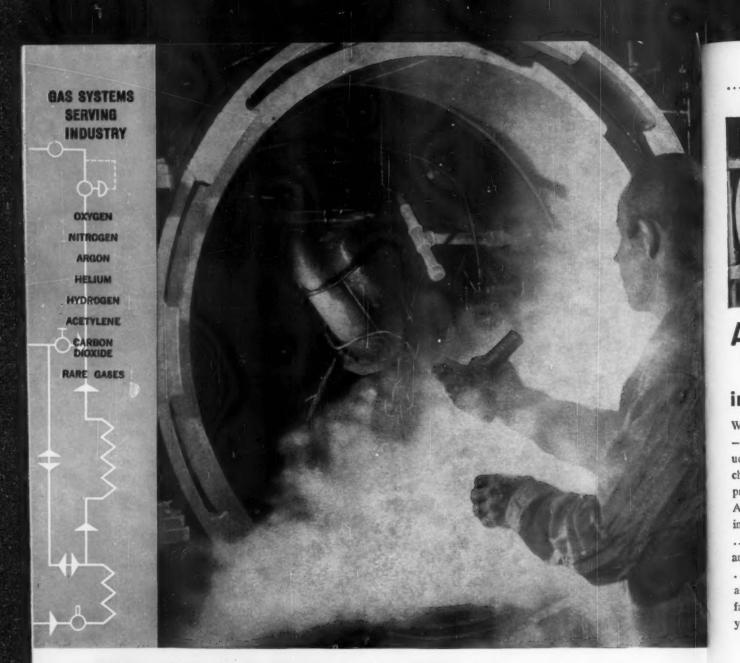
Hughes transistors are far more practical than the vacuum tubes they can replace. Their small size, low weight and low power needs are revolutionizing electronics.

HUGHES Semiconductor Division Newport Beach, California

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HUGHES

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builders would slice this minimum down to around \$50,000.

Not all the obstacles to realization of the modernist architects' dream come from the hesitant tastes of customers or their financial troubles. Some come from the architects themselves.

II. Troubled Dream

As enthusiastic as architects may be about modernism, and however highly rated in their profession, they frequently find that houses, regardless of style, are money-losers for them. In most places, their standard fee is apt to yield them a net loss, a fact that makes many shup residential designing

shun residential designing.

Mies van der Rohe, for example, has limited himself to commercial and public contracts for the past 10 years. Victor Christ-Janer, of New Canaan, Conn., an exponent of highly individualistic contemporary, cites a recent house he did; his fee was \$7,500, but "my costs, including my employees' time, came to over \$11,000."

• Excess of Zeal—Some down-to-earth real estate men cite another obstacle: The average architect with advanced "contemporary" ideas, they say, is a dedicated man with a chosen mission in life—to convert society to "true" modernism. That tends to make him downright uncompromising. And this, in turn, may scare away the customers.

"Let's face it," says an old pro whose real estate firm serves the lusher northern areas of New York's suburban Westchester County. "Some of the contemporary boys take pride in being different—they deliberately limit their residential market to a small group, make their money on commercial."

• Good and Bad—At the same time architects and realtors agree there's often not enough independent thinking and feel this is damaging to acceptance of the new style. They think there is too much imitative watering down, too much of what leaders in the art call "bastard" contemporary—and too much following of set patterns.

Architects, when pressed, will point to some rules of thumb.

A good contemporary house, they say, must have visual-emotional appeal, must please. It must look natural in its setting. Dramatic features, such as the cantilever or glass wall, must not be used just for "effect," but have a functional purpose. Materials must be used honestly—not aluminum painted to look like wood, for example.

And the inside and outside should

And the inside and outside should have a unity in design.

III. Westward Roll

Despite all obstacles, the modernstyle house has made considerable headway since its start in the U.S. in the mid-1930s with the work of Frank Lloyd Wright and of a small group of visionary Harvard men.

In 1935, there were no more than maybe 25 to 30 "true" architect-designed ultramodern houses in the U.S. By 1946, when the style first began to attract wide attention (if only a few brave buyers), there were perhaps 800 to 1,000. Today, real estate men put the figure at 8,000 to 10,000, with something like 1,000 to 1,200 new contemporaries (worth roughly \$75-million) added in 1960.

As the style has spread, adherence to the opposing schools—the dramatic, close-to-nature school of Wright, and the "neo-classical," or as he prefers it, "logical" approach of Mies van der Rohe—has waned. Today, the individualists who disdain the schools in favor of their own ideas probably include a majority of the country's highly creative architects.

• West Coast Modern—Whether it follows a school or an individualistic trend, there's no doubt that the attraction of modernism in the home grows greater as it moves westward.

The West Coast has a higher percentage of contemporary houses than most other areas, perhaps even an architectural image all its own. The ardent boosters of West Coast modern—and the West Coast generally—give the impression that a good number of Far West towns, Los Angeles and San Francisco among them, are verdant oases of crisp contemporary in a national desert of outmoded traditional.

In Los Angeles, building contractor Donald Buhler does 85% to 90% of his work in contemporary—a record few Eastern builders could even begin to match. He has even gone into modernism on a speculation basis, with a development called San Ysidro Highlands in the Beverly Hills section (houses at \$50,000 to \$90,000).

Pacific Beachhead—Hawaii can go the West Coast one better. Almost all \$50,000-and-up homes built in the 50th state today are custom-designed contemporary, says Earl Thacker, head of a Waikiki-based realty firm.

There's more than tradition-free taste in this, though. Hawaii, with its own tropical-Pacific-American motif in architecture, is probably the only state where a traditional style house, custom-designed or not, would cost substantially more than a strict modern—about 25% more, says Thacker.

The reason, Honolulu architect George Wimberly explains, is that "a traditional uses considerably more material than a Hawaiian modern—double vs. single walls, for instance." And, mainly because of more middlemen and high shipping expense, it's material, not labor, that is the big cost element in Hawaii. END

In Marketing

Blackstrap Molasses Producers Sign Consent Order in Price Fixing Case

A consent order has ended a Federal Trade Commission proceeding against the blackstrap molasses industry, in which several producers were charged with fixing prices and coercing competitors and customers.

FTC also claimed the companies boycotted rivals who did not adhere to the fixed prices, divided territories and accounts among themselves, and designated one among

them as sole bidder on available supplies.

Producers agreeing to the consent order—in which they admit no wrongdoing but consent to cease the alleged practices—were Southwestern Sugar & Molasses Co.; Standard Molasses Co., Inc., and Imperial Molasses Co., Ltd., subsidiaries of Southwestern; Industrial Molasses Corp. and National Molasses Co., identified as "business affiliates" of Southwestern; Czarnikow Rionda Co.; J. H. Leftwich & Co., Inc., and Molasses Trading Co. Some officers and employees of the companies were also named in the FTC complaint.

The commission dropped a similar action against New Mexico Timber Co. and a Mexican subsidiary of Southwestern, Compania de Mieles de Mexico. Both concerns became inactive in molasses after the charge was filed.

Blackstrap molasses is used as a basis for industrial alcohol and rum and as an additive for cattle feed.

Alcoa and United Shoe Develop Can That's Opened By Pulling a Tab

Aluminum has a new weapon in its battle with steel for the metal container market. The Aluminum Co. of America joined forces with United Shoe Machinery Corp. to develop a can with a thin aluminum top that's easily ripped off by pulling on a tab. It works, says Alcoa, because aluminum is softer than tinplate.

A finger loop is welded to the top, which has been scored near the edge. When you lift the loop and pull, the edge strip peels off, and the top with it.

Alcoa's prototype isn't an all-metal can. Its body consists of paperboard laminated on both the inside and outside with aluminum foil. However, the company says the tab principle could be employed just as well on all-aluminum cans or ones with tinplate bodies and aluminum tops.

GM Is Still the Top Advertiser; Procter & Gamble Is Runner-Up

General Motors Corp. last year increased its lead as the No. 1 advertiser in the nation. According to Advertising Age's annual survey, it spent \$155-million, with the bulk of it in print media.

MORE NEWS ABOUT MARKETING ON:

- P. 65-Appliance recession spurs trend to factory-owned distribution.
- P. 70—The Marketing Pattern: Lasker's legacy to admen.

Procter & Gamble, as usual, ranked second (\$123-million) ahead of General Foods, Ford, and Lever Bros.

Though P&G far outspent its major competitors in total advertising, its budget was a modest 9.5% of sales volume, compared to 22.2% for Lever, 24.5% for Colgate-Palmolive, and 29% for Bristol-Myers Co. In contrast to this, advertising outlays by GM and Ford amounted to less than 2% of the auto companies' total sales.

U.S. Steel's New Drive Tells

Customers Now Is the Time to Buy

One of the nation's largest corporate spenders, U.S. Steel Corp., thinks that now is the time to buy. So for the rest of this year and into next it will be urging its customers and suppliers to do just that. And it will be pushing its own capital spending along at the very high levels it has maintained for years—even though these days, steel makers need capacity like a dog needs fleas.

days, steel makers need capacity like a dog needs fleas. That's what is behind U.S. Steel's "Watching America Grow" campaign which kicked off this week. It will employ all the high-level hoopla that you'd expect to accompany any such institutional opinion-forming campaign. But its message for business is the critical part,

and says U.S.S. Chmn. Roger M. Blough:

"If anyone really wants to make his capital expenditure dollar go as far as possible, now is a very good time to do it..." In a direct, if unspecified, reference to predictions of declining capital spending, (page 25) and a recession next year (BW—Sep.3'60,p30), Blough adds pointedly: "... and by displaying confidence in America's growth and its future, we all contribute to job security and increasing employment."

Lowell Thomas will be Big Steel's reporter in the nationwide campaign using newspapers, magazines, and television to spread the message that the United States isn't really going to the bowwows, even though high-pressure headlines and Russian propagandists make it appear so. Thomas will "assemble stories of people and business . . . and then report the things they are doing that prove the vital strength of America," Blough said.

U.S. Steel spending, Blough made it clear, will maintain its high level. Over the last 18 months, in spite of the industry's longest strike and a sickly market most of this year, the corporation has spent \$588-million for replacement and modernization and now has projects that will require another \$675-million to complete.

This will maintain the corporation's spending on the same high levels that have been customary for the last nine years, a period when the corporation boosted its own capacity by 23.8% and the industry was adding 41.6%. This was the period of greatest steel expansion and it yielded an ingot capacity which the market hasn't come close to using since 1956.



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The postoffice sets your meter for any amount of postage you want to buy; and you can trust the meter to protect your postage from loss, damage, misuse. And postage is automatically accounted for, on easily legible registers. Metered mail also needs less handling in the postoffice, can often get on its way sooner.

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The steel joists shown above are made by Armco's Sheffield Division. They're light, strong and speedily erected. Sheffield's steel-making facilities produce steels and steel products for construction, oil, agriculture, railroads, ship building and many other markets.



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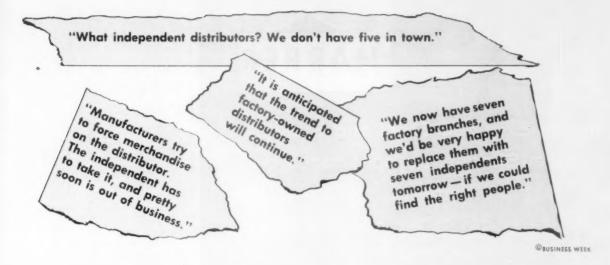
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Branch Distribution Trend Gains

Facing an uncertain and highly competitive market, many appliance manufacturers are shifting from independent distributors to factory-owned branches—even though they would prefer to work through independents.

It's clear from the statements above that manufacturers, beset by some of the fiercest competition for the consumer dollar they have ever experienced, are out to whip their distribution channels into shape.

Their efforts raise an old question: Are manufacturers moving in on distribution as they have moved in on the merchandising function? If so, why?

The answers run every which way. But on one point, there is little doubt. In major markets, factory branches—factory-owned distribution points—get the lion's share of the appliance distribution job.

Probably the chief reason is the fact that there just aren't enough good distributors to go around in the hot battle among the myriad of appliances and brand names. So producers, in order to maintain their share of the market, find it necessary to set up their own shops.

This isn't to say that the role of the middleman in the economic system is outmoded. The wholesale function, which brings the factory and its production up to the point of the ultimate retail sale, cannot be eliminated, since customers want to buy at their convenience, not all the convenience of the producer. Hence, producers must ensure that goods are stocked and readily at hand (1) at the retail level for the consumer and (2) at the wholesale level for the retailer.

The question is how to do this most efficiently and, for any particular brand, most effectively. Independent wholesalers themselves ordinarily have no direct interest in whether Brand A or Brand B sells. Their interest is in making money. With the broad choice of brand names available in all kinds of business, wholesalers become prime targets of manufacturers' selling efforts.

One way manufacturers have to sell is to create a demand for a product at the consumer level through hefty advertising, forcing any wholesaler or retailer to stock their particular brands in order to satisfy the consumer.

In appliances, though, wholesalers and retailers are often limited in the lines they can carry because of the high investment cost. So they pick and choose and often push the line that is the easiest to sell.

In depressed conditions that exist today in the consumer durable industry, this leaves some manufacturers out in the cold. Besides that, each manufacturer attempts to get the best distributor in town—and, with the price-cost squeeze on distribution profits, there aren't too many good distributors left.

All this adds up to the basic problem of a market loaded with goods: making sure your products are on hand when buyers are and that they get the necessary promotion against all the competition. Reluctant as they may be, since the cost burden falls on them, manufacturers more and more are turning to owning their own middleman distribution to do precisely the kind of selling job that independents should.

• Over-All Trend—The trend dates back over a decade. It has accelerated noticeably, though, in the last couple of years. And if appliances wind up 1960 with a load of inventory and a soft market, the trend will continue.

The reluctance of some manufacturers to talk of their plans makes a realistic appraisal of the situation difficult. Both Westinghouse Electric's Consumer Products Div. and Frigidaire Div. of General Motors refused any comment.

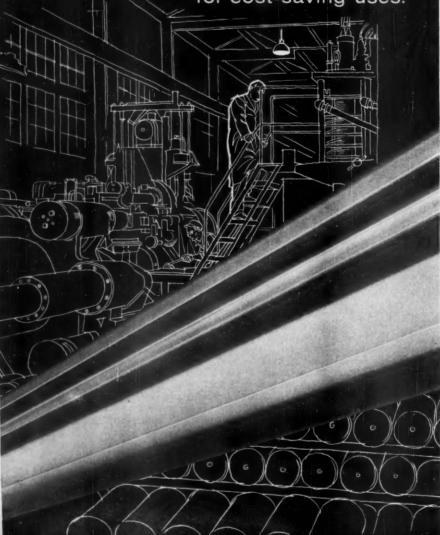
In the trade, though, it's been an open secret that Frigidaire is moving steadily toward factory branch distribution. One estimate has it that the company has reached the 50-50 point; another says that Frigidaire branches are now handling 60% of the distribution load.

Over the long pull, General Electric Co.'s Major Appliance Div. has gone to more branches. Before World War II, it had 17 branches, 33 independent distributors. Today, it has 26 branches and only 13 independents, and concedes that this trend is being encouraged. General Electric's Hotpoint Div. does 75% of its volume via branches; a single big independent—Graybar Electric Co.—is credited with another 20% of Hotpoint's business. Phileo has 10 branches; Admiral has 13. American Motors' Kelvinator Div. has 21 branches as against 36 independents.

In the big cities, particularly, the switching continues. Sylvania, Admiral, and Philco have all gone the branch



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shapes in any length you require
for cost-saving uses.



route in Los Angeles. Maytag Co. has just started a Chicago branch. In Chicago, Easy Washing Machine Co. took its line from Remco, an independent, and opened its own outlet in recent weeks. And last year, Easy set up a branch for California.

• Unhappy Situation—An executive of Easy told Electrical Merchandising Week, a McGraw-Hill publication, that the company isn't happy with the situation and would prefer not to terminate any more independent distributors. "But," he added, "we're not going to settle for third-rate distribution just to have independents." He complained that in some places Easy's line isn't getting the necessary attention. "Our line needs efforts," he said, "and we are going to get it."

Distributors feel that in the large cities, the independents are hurting. It was the loss of several of its lines that drove a big Chicago independent, Sampson Co., to Japanese lines (BW–Jun.4 '60,p52).

Yet this isn't the whole story:

 The branches aren't having it all their way. There's a counter trend though somewhat spotty—toward independents in some markets.

Most companies, even those with a strong branch setup, insist they would prefer to work through independents.
 Counter Trend—Some companies have actually moved away from branches. Admiral Corp. has cut its branches from 18 to 13 in the past five years. Borg-Warner Norge Div. tried a branch—its only one—in Chicago briefly, then closed it down. Hoffman Electronics' Consumer Products Div. is in the process of closing its last branch, in Los Angeles.

While independents have been withering on the vine in some instances, others have flourished. One large distributor says he has picked up several lines that got loose when a factory branch closed up. Knickerbocker Distributing Corp., Motorola distributor in the New York area, started as a branch, now is running on its own power; it reports business has quadrupled in three years. Peninsular Distribution Co. in Detroit has had a 20% volume increase yearly since 1955. And Whirlpool Corp., about alone among the giants, is still sticking to independents.

The paradox that branches flourish despite the manufacturers' preference for independents reaches to the heart of the matter. When, where, how does a branch tick?

I. Why Branches

For the sake of argument, you might oversimplify the situation by saying that the branch is a measure of a strength and a weakness: the strength of the manufacturer, and the weakness of the market. Often only the manufacturer seems able to supply the heavy capitalization and large sales force, maintain the necessary broad-line inventory, and sustain the narrow profit margins that an uncertain and highly competitive market demands.

• Finding the Money—It takes a heap of capital to carry the broad lines. One rule of thumb has it that to get good volume in appliance distribution requires capitalization of \$150,000, plus \$300,000 more in credit. GE cites estimates that "basic demands for working capital to cover accounts receivable, inventory and payrolls, plus necessary investments in plant facilities and rolling equipment call for an initial investment that is generally in excess of \$1-million." It adds: "In the light of this factor alone, it is anticipated that the trend to factory-owned distributors will continue."

• Slim Profits—However, the problem of finding the money isn't the whole story. An independent must make a profit to survive. And in these days of cut-throat competition, chaotic pricing has shaved some profits to a hair.

Some dealers blame the big manufacturers, each of whom, they say, is overproducing in hopes of getting bigger volume, and forcing merchandise on the distributor.

With slim profits and lack of capital squeezing the distributor, the manufacturer increasingly has to rely on his own forces. As a producer, he has two primary concerns: to keep the plant rolling, and to hang onto his share of the market. Profit at the distribution level becomes secondary.

Another reason for the branch gets fewer mentions. Some manufacturers feel that independent distributors have fallen down on the job. They are unwilling, especially, to put sufficient push behind new products.

II. Where Branches Shine

Once you go beyond the prime markets, the picture changes drastically. Here, most hands agree, the independent gets his innings.

• Branches Expensive—For one thing, a branch setup costs a lot of money. As Philco puts it, it just does not have the wherewithal to set up factory branches all over the country. A manufacturer would prefer to put into production, research, and the like, the capital a branch system may tie up.

For another, in a factory branch, one line must bear all the costs. The only hope of profit from a branch is a concentrated market. That is why, many think, independents will probably hold their own in less-populated areas. An independent can spread out his costs over a number of lines.

The independent gets high marks on





Joy fans for ventilation service have adjustable blades which can be reset manually or automatically. Fan output can be adjusted to meet changing requirements for ventilation air in a matter of seconds. If automatic operation is desired, the controls can be linked to a sensing element and blade pitch changed in response to variations in temperature, humidity, CO₂ concentration, etc.

Joy Controllable-Pitch Fans can be furnished in a wide range of sizes and capacities for commercial and industrial ventilation and cooling. The vane-axial design, with integral motor, combines high efficiency with the economy and convenience of in-the-duct mounting. Joy Adjustable-Pitch Fans offer the same design advantages at a lower cost, because each blade is re-set individually but easily.

In addition to a complete line of efficient vane-axial fans for ventilation duty, Joy is the leading producer of custom designed fans for shipboard and aircraft service. Whatever your air moving problem may be, there is a Joy fan which will provide the best solution for you. For complete details on Joy fans, write for Bulletin 1144-56.

A





another count: The local or regional distributor knows his territory, knows his dealers. Often—through complementary lines he carries—he has access to retail outlets a manufacturer may not have.

For all these reasons most manufacturers would echo the executive of Packard-Bell Electronics Corp. who said, "We now have seven factory branches, and we'll be very happy to replace them with seven independents tomorrow—if we could find the right people."

III. Where Now?

Lacking the right people, some companies have hit on a sort of compromise setup to shore up sagging distribution systems

• Reorganization—In the last five years, Admiral has drastically changed its concept of the factory branch. It treats branches just like independent distributors. Carl Lanz, sales vice-president, says, "The only thing wrong with factory branches were that too often managers weren't made accountable for inventory and the factory personnel were badly trained."

So Admiral capitalized its branches, made them responsible for profit and loss, instituted tight financial controls, and put on a vigorous training program. The result, according to Lanz: 18 months ago, all its branches got onto a profitable basis.

Maytag has a similar setup for three of its 10 branches. Although they are wholly owned by Maytag, they are set up to run on a profit-and-loss basis.

• Sales-Oriented Production—Manufacturers more and more are turning to the view that a branch can't be healthy—any more than an independent distributor can be—if it serves merely as a dumping ground to keep the factory running. "We came to the conclusion years ago that pressing merchandise on a distributor just gives him financial indigestion," says E. B. Barnes, general sales manager for Kelvinator.

To lick this problem Whirlpool, like Kelvinator, uses what it calls "levelized production" based on sales forecasts. Even in this slow year, Whirlpool says it has not had to cut back production, nor has it glutted its distributors. And Whirlpool has also instigated a vigorous training program for distributors.

If the manufacturers are increasingly giving thought to the problems of their distributors—whether independent or owned—the distributors themselves in some cases are giving more thought to their job. Thus, Detroit's Peninsular Distributing Co., for example, maintains its own advertising and sales promotion staff, develops 95% of its own promotions, has a broad dealer training program, especially for dealer service men. END



TWO CAN JET TO EUROPE FOR LESS THAN ONE...ON SAS

At long last, long distance business travel "by your lonesome" is over. Instead of parting from your wife, here's a new way to make her part of your plans.

Starting October first, SAS introduces 17-day jet economy round trip fares to Europe with reductions up to 29%. Now, rather than your flying unaccompanied in SAS first class—(much as we'd love to have you)—both you and your wife can fly in popular SAS economy class for less than one first class fare! Then, together or separately, you can visit extra cities at no extra fare.

FLY TRANSATLANTIC OR TRANSPOLAR on the magnificent SAS DC-8C, only jet to combine speed with the added personal service of a Maltre de Cabine. Your SAS travel agent will make the arrangements...and your wife will gladly take care of the packing. Write SAS for helpful folders.

Happiest Combination in Jet Age Travel



SCANDINAVIAN AIRLINES SYSTEM 638 Fifth Avenue, New York 20, N. Y.

SAS-General Sales Agents for Guest Aerovias Mexico, Iranian Airways and Thai International

how the triton holds holds holds

The Triton, latest and largest atomic sub, can hold its breath for weeks under water. 148 men live safely, work efficiently, breathe easy. The recirculated air they breathe is kept pure and odor free with activated charcoal filters. Why not "up periscope" on other uses for activated charcoal.

how to bar the tar



A vapor trap no bigger than a cigarette filter—now, oddly enough, goes on a cigarette that's making big news. Vapor phase contaminants such as tars are hauled up short by activated charcoal built into the filter. Maybe you are a pipe smoker—or a non-smoker—and worry about contaminants in other forms. Try activated charcoal. It'll knock the tar out of your problems.

how to keep your spirits



Distillers who store alcohol in barrels watch the level go down as the age goes up. Now—distillers may use activated charcoal to turn costly vapors into pure liquid form, fresh as the dew—with very attractive savings. Activated charcoal recovers many expensive vapors for as little as 2c per gallon.

activated charcoal



Activated charcoal acts as a molecular sponge, purifies air, gases, liquids—recovers solvents—removes odors and impurities. Write for Bulletin T-360. Barnebey-Cheney, Columbus 19, Ohio.

Barnebey Cheney

The marketing pattern

Lasker's Legacy to Admen

t is John Gunther's opinion that Albert D. Lasker, the mercurial head of Lord & Thomas advertising agency (now Foote, Cone & Belding), wouldn't have liked some of the advertising being created today. In his biography of Lasker, Taken at the Flood (McKay), Gunther says he is certain Lasker would have deplored the fancy, contrived words of automobile advertising, such as "True-Level Torsion-Aire Suspension," or the White Horse whisky ads showing a man on a blindingly white horse. He even has doubts that Lasker's genius would have approved of the Man in the Hathaway Shirt with his eyepatch or Commander Whitehead's beard.

The point is beyond arguing, of course, since Lasker died in 1952 and had resigned from the business 10 years before that.

• Times Have Changed—One thing is certain, though. Times—and the problems of advertising—have changed since the days when Lasker was amassing a handsome fortune for himself and his clients. He was out of the business, for instance, long before television had transformed the airwaves into the biggest advertising medium of all.

But more importantly, Lasker had turned to art collection, politics, and philanthropy before the great postwar explosion of consumer buying, which resulted in the kind of prosperity the 1920s seemed to promise but never fulfilled.

• Different Economy—The truth of the matter is that Lasker's career as one of the most successful of all advertising men was built on what we can now look back on as an economy of scarcity. True, there were the prosperous 1920s. But even during the lushest days of that era, large numbers of people didn't share in the wealth. To a great extent, the mass market was confined to the necessities of living. Consumers didn't own their own homes for the most part; millions of families didn't have cars; many were unable to buy the new-fangled refrigerators and washers.

Thus, Lasker and his fellow agency people—who together created the advertising business as we know it today—grew up with and helped shape some entirely new industries such as appliances, automobiles, convenience foods. They had a world to conquer and did so, sometimes crudely, sometimes unethically, sometimes with luck—but always with brilliance.

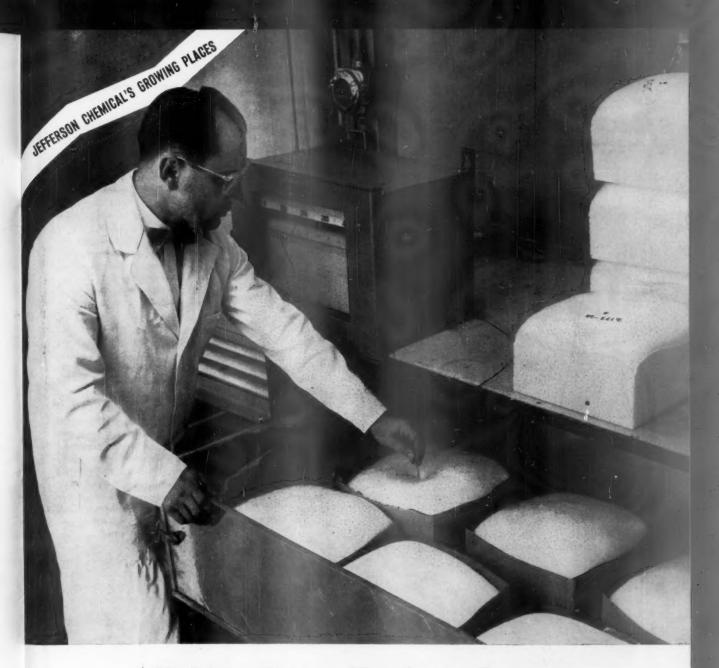
• Radio's Promise—It was Lasker, says Gunther, who first saw the potentials of radio as an advertising medium (and who probably, hints Gunther, was somewhat ashamed later in life of the soap operas and the commercials he helped create). "His contribution to advertising was prodigious," says Gunther, "and some results are with us yet. Lucky Strike, Pepsodent (and Bob Hope), Kleenex, Palmolive, Studebaker, Sunkist, RCA, Frigidaire were among the multitudinous products and trade-marks spawned or popularized by Lord & Thomas."

Lasker himself felt that his concept of advertising as "salesmanship in print" was one of the three greatest contributions to the business. The other two were the standard 15% contract developed by N. W. Ayer and J. Walter Thompson's introduction of sex to advertising by using the headline, "The Skin You Love to Touch," for Woodbury's soap.

• Pioneering—The thread through all of Lasker's advertising career is the breaking of new ground—and, most fortunately for him—of having unplowed markets to break. Cigarette sales boomed, for instance, when Lasker was able to violate taboos against women smoking.

A new industry was born when Lasker decided people ought to drink not eat—oranges. Likewise, it was Lasker who was able to break tradition by advertising Kotex in an era when such intimate products were hardly mentioned among friends, let alone advertised.

Certainly, reading Gunther's detailed and admiring account, you



Baking Better Urethane Loaves

What are the recipes? With our new foam machine, we are learning them at Jefferson. The urethane cook book is being constantly revised and improved . . . to help you make lower cost, higher performance foams.

With the aid of the exceptionally versatile Mobay M-13 Foam Machine, we are able to evaluate new polyether and catalyst systems and develop new ure-thane foams having specialized or superior properties. Jefferson offers polyethers for high quality flexible,

semi-rigid and rigid urethane foams . . . polyethers built with specifications to meet the industry's exacting standards. Excellent catalysts, N-methylmorpholine, N-ethylmorpholine, and the interesting amine, N,N'-dimethylpiperazine are also available in commercial quantities.

For a partner in developing better urethane products, contact . . . Jefferson Chemical Company, Inc., 1121 Walker Avenue, P. O. Box 303, Houston 1, Texas.



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 the Utah, Idaho, Colorado, Wyoming area so rich in natural resources
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 Telluride Power Company and The Western Colorado Power Co.



Our brochure "A Treasure Chest in the Growing West" is specific, concise, reliable. It discusses the almost inexhaustible storehouse of raw minerals and chemicals; fuel, water and power resources; transportation facilities, market growth. It tells about the human factors — climate, living conditions, unlimited elbow room. It lists nationally known companies already here. Inquiries held in strict confidence.

WRITE TO: D. H. White,

Manager Business Development Dept., Dept. 98, Utah Power & Light Co., Salt Lake City 10, Utah

A Growing Company in a Growing West



(Continued)

can't help but agree that advertising, as conceived and developed by men like Lasker, played an outstanding role in building our consumer economy. For all its faults (and Lasker was well aware of them), advertising was justified in reaping the financial rewards for this job. If it made millionaires out of pitchmen, it also made industries out of what might have simply remained bright ideas.

 Skepticism—That brings us back to Gunther's doubts about Lasker's views on a lot of today's advertising.

After World War II, the American consumer came into his own. Loaded with wealth accumulated during years of scarcity of goods and hungry for things he never could afford before, the consumer rushed into the marketplace to spend his money for almost any product. The scramble of companies to attract the attention of the consumer toward their own products drove up outlays for advertising—and almost anything seemed to work as the starved consumer filled up.

Today, it seems pretty clear, the consumer has become far more sophisticated than he was in the days of Lasker or in the immediate postwar period. His hunger for goods seems just a little bit jaded.

 Message for Today—So it is interesting to ponder just what a Lasker, with the ingenuity and the pioneering spirit he possessed, would do to make advertising work as hard and effectively now as it did in the 1920s and 1930s.

Agencies and advertisers themselves might profit by thinking of Lasker, not in terms of what he did specifically, but how he refused to accept the practices of the time. What they might come up with undoubtedly would be—and should be—different from the techniques Lasker used. But one Lasker technique if that's what you can call it, which they might try is originality. That was his key.



How strong are a Skyhawk's talons?

Landing gear hit a carrier flight deck with a mighty wallop. How well will the Douglas A4D Skyhawk attack bomber withstand this impact? Tatnall Metal-Film strain gages developed by Budd's Instruments Division provided the answer, as part of a massive testing program for the Skyhawk. These gages are smaller than a paper clip, and may be only a thousandth of an inch thick. Designed to translate physical strain into electrical terms, they're cemented to the landing

gear and electrically connected to a recording instrument. As the landing gear flexes under impact, the strain gages flex with it, and flash to the recorder the exact amount and direction of principal stresses and strains. Amazingly accurate, strain gages are valuable tools in the testing of supersonic aircraft and missiles. They represent one aspect of Budd's diversification in the study, testing and fabrication of metals. The Budd Company, Philadelphia 32, Pa.

Mainstreams of Budd's diversified interests: Automotive,
Electronics, Metals Testing, Nucleonics,
Plastics, Railway and SpaceAtomics.

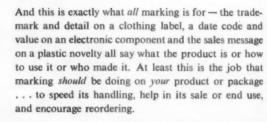
THE COMPANY
OFFICES AND PLANTS IN PRINCIPAL CITIES



"Looks like the Third Division is moving up . . ." "... those are staff sergeant's stripes" "The 15th Bombardment is here ..." "He just made Electronics Technician third . . ."

In this way every man in the armed forces during World War II unmistakably identified his rank or specialty, his outfit - by the marking on his shoulder patch, on his "stripes", on the plane he flew. Literally hundreds of new marks had to be devised to identify the special groups and the greater numbers in service than ever before in history - yet millions of people nevertheless recognized these marks and instantly knew their meaning.





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BU

Our business is developing the machines, printing elements and specialty inks to help you identify your product more effectively - and at the same time save you money. The best answers for one industry are often totally different from those for another industry, so we have available a sizable variety in equipment, marking methods and inks. The easiest way to find out which combination best suits your needs is to tell us what information you want to put on your product - and what the product is. Our answer may mean smoother production in your plant - and money in your pocket. Markem Machine Co., Keene 33, N. H.



Everything industry needs MARKEM ... for profitable marking

... since 1911



Top to bottom: 79th Inf. Division, Electronics Technician 3 (Navy), 9th Bombardment Group, Staff Sergeant's chevrons, Third Inf. Division, 15th Bombardment Group, Navy Squadron VF-6.





RESEARCH

RUSSIAN delegation to Rochester conference was headed by Vladimir Veksler, center, discussing a point with U.S. physi-



Wanted: Bigger Atom Smashers

To study the infinitely small, it is necessary to build the fantastically large. That has been the cry of nuclear physicists for years as they've struggled for funds to build their giant atom smashers.

These machines are used to fire nuclear particles at other nuclear particles to uncover new facts about the basic laws of matter.

The bombarding particles-protons, deuterons, or whatever the scientists have selected-are accelerated up to fantastically high speeds and then used as miniature battering rams to knock other particles out of position in the atomic nucleus. The energy or speed acquired by a single bombarding particle is conventionally expressed in terms of electron volts. One electron volt is roughly equal to the amount of energy expended by a flashlight battery in forcing one electron through the filament of a bulb. Electrons in atoms have an energy of several electron volts available for chemical reaction; electrons accelerated through a TV picture tube have energies in the thousands of electron volts. A splitting atom of uranium in a bomb releases approximately 2-million electron volts.

In recent years, atom smashers have been built with energies well up in the billions of electron volts. Two 30-billion electron-volt (Bev) accelerators just recently came into operation, one at the Brookhaven National Laboratory on Long Island and the other at the Center for Nuclear Research in Geneva, Switzerland.

But last week, 350 of the world's top atomic physicists meeting at the University of Rochester to discuss progress in their field made it clear that they want still more powerful accelerators.

• Bigger, Ever Bigger-The Soviet Union is nearing completion of a machine rated at 60 or 70 Bev, and other big new accelerators are under construction at Cambridge, Mass.; Hamburg, West Germany, and Yerevan, U.S.S.R. But the physicists who spoke at Rochester for their 30 countries are thinking in terms of much more powerful devices, up in the 100- to 300-Bev

Such a monster could be designed and probably made to work right now, but the construction job is more feasible technically than economically. It would probably cost more than \$200million, perhaps as much as \$500-million. Yet nothing much less powerful or much less costly will serve to unmask the secret of how the so-called "strange particles" combine to form the nucleus of an atom-the very heart of the mys-

tery of matter.

I. No Country in Lead

Every major high-energy laboratory in the world was represented at Rochester by at least one top man. The Russian party numbered 28, the largest Soviet delegation ever to attend a scientific meeting outside the U.S.S.R., and brought along 74 papers to read. It was headed by the distinguished Vladimir Veksler (picture, above) of the Joint Institute for Nuclear Ressearch at Dubna.

Observers at the Rochester meeting got the impression of an even giveand-take of information. Quite clearly, no one country dominates the field of high-energy physics research today, nor does either side of the Iron Curtain seem to have taken the lead from the other, in the realm of theory or in experiments

• Brave Theories-There have been no great leaps in high-energy physics research since last year's conference that was held in Moscow, but several important gaps in basic understanding have been filled in.

Some exciting new theories, still without proof, are also now circulating in the scientific community. These would, if verified, explain such things as what the core of a proton (the positively charged nucleus of the hydrogen atom) looks like and what is happening to matter on the fringes of space.

Scientists aren't saying that they can come up with proof soon of some of the newer theories. But they are encouraged by the very ingenuity of the thinking. It was from this same kind of outpouring of ideas that the atomic age was



Microfilm mile-long, yard-wide records... FAST!

You capture any image in one continuous exposure when you feed your records to the 42" Photostat® microfilm camera. This versatile camera takes document widths up to 42", and any length at all.

And you microfilm fast. You have a rapid choice of reduction ratios. Your actual recording goes at a speedy 40 feet per minute.

Get 3 machines in 1. It's an enlarger, too. Put the microfilm back in the camera and you can flow-project a sharp, exact reproduction. Full- or half-size continuous enlargements are possible from 16mm and 35mm microfilm.

[©]Registered Trademark of Photostat Corporation

The Photostat 42" microfilm camera is also a positive film printer. It makes as many positive rolls from your negative as you want.

For a proof demonstration of how this camera can save you time, space, and money, contact your nearest Photostat Corporation sales and service office . . . or write us.

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PROJECTION PHOTOCOPYING equipment and supplies OFFSET DUPLICATING equipment and supplies PROCEDURAL MICROFILMING equipment and supplies OFFICE COPYING equipment and supplies



born. That's the reason why researchers are eager for the powerful, admittedly expensive machinery to investigate the

II. Series of Triumphs

In the past, every new jump in energy available from the giant atom smashers has produced significant new findings about the nature of the particles that make up the atom.

The first atom smasher, a 37-in. eyclotron built at the University of California, helped develop the electromagnetic separation process that made it possible to produce uranium 235 for atomic bombs. A later 60-in, model (also at the University of California) was the machine on which Dr. Edwin M. McMillan (picture, below right), along with Drs. Ernest O. Lawrence and Glenn T. Seaborg, worked to identify the so-called transuranium elementselements 93 to 98.

When atom smashers in the 100million electron-volt range became available, science first got wind of the fact that the "strange particles" existed. The first Bevatron (a 6.25 Bev machine at Berkeley) is credited with

finding the antiproton.

In each case, the scientific rewards for governments investing in such costly research tools have been tremendous. Yet to build an accelerator able to take the next step up the energy range will mean the kind of expenditure that has never before been considered. This is what troubles those who are responsible for seeking funds for such a

· Which Type?-Another thing administrators are worrying about is the mixed opinion within the scientific community as to whether building more powerful "race track" accelerators is really the best next move. Another type of atom smasher-the heavy-ion linear accelerator (called HILAC for short)continues to impress many physicists

with its potential.

Unlike the race-track evelotrons and synchrotrons, which use magnetic fields to whirl atomic particles in circular orbits to higher and higher speeds, the linear accelerator fires its nuclear bullets down an elongated gun barrel. Particles are kicked up to higher speeds along the way by means of a highfrequency electrical field, set up within the gun barrel itself,

· Comparative Virtues-Theoretically, the linear accelerator has a lower power potential than the race-track accelerator. But the HILAC is able to produce a beam of much greater intensity. In a linear accelerator, the stream of particle bullets shoots straight out at a target in a much more concentrated beam that scientists have been able to produce with circular accelerators. There's prac-



C. N. YANG AND T. D. LEE of Princeton's Institute for Advanced Study, posed the theory that an entirely new particle known as "W" may explain weak interactions.



J. ROBERT OPPENHEIMER of Princeton's Advanced Study Institute.



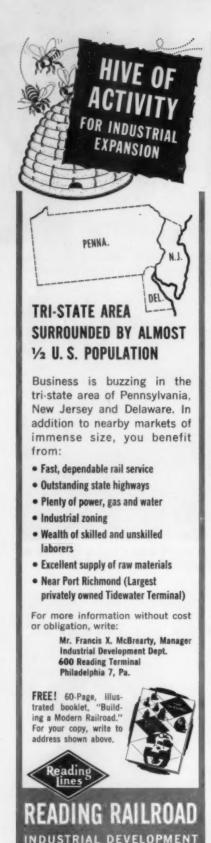
E. M. MCMILLAN of the Lawrence Radiation Laboratory, Berkeley, Calif.



W. HEISENBERG of the Max-Planck Institute, Munich, West Germany.



D. BLOKHINTSEV of the Joint Institute for Nuclear Research, Dubna, U.S.S.R.





ISIDOR I. RABI of Columbia University, New York City.

tically no variation in energy of the bullet particles coming out of a HILAC. And there's a minimum of stray radiation for researchers to worry about when it comes to making precise radiation counts.

Congress is considering construction of a 40-Bev linear accelerator, with a gun barrel more than a mile long, to be built underground at Stanford University in California. This mile-long HILAC would cost about \$100-million.

Maybe Both—But, before all the questions about the fundamentals of matter are finally answered, it may be necessary to build both ultra-high energy and ultra-high intensity atom smashers, according to the world's top physicists (including eight of the Nobel Laureates).

Therefore, if the science of highenergy physics is to continue to advance, a large majority of the physicists at the Rochester meeting think it wouldn't waste time or money to build either a super high-energy accelerator or a super high-intensity accelerator. The more important thing, they agree, is to get construction of either one or the other moving as expeditiously as possible.

III. Exchange Findings

At Rochester, physicists heard reports on significant findings in the highenergy physics field.

To the non-scientist, such reports quickly become lost in a mire of technical jargon. Some of them clearly indicate, however, that high energy physics research is steadily moving ahead. This type of R&D is still far removed from practical applications. But its continued progress is necessary, if man is ever to completely master the matter of which



OWEN CHAMBERLAIN of the University of California at Berkeley.

his world is made. How work is progressing, therefore, becomes significant to industry broadly.

This year's record of achievement, while not spectacular, is a commendable one.

For example, two U.S. teams of researchers (one at the Naval Research Laboratories and the other at the California Institute of Technology) came up with identical results that establish a new universal constant—the measurement of the lifetime of the pi zero meson (called pion, for short).

This is a measurement that scientists have been trying to make for the better part of a decade—because it represents the shortest lifetime of anything scientists have ever identified, or expect to identify, in the physical world.

• Completing Order—Pions serve as the glue that holds together the particles that make up the core of an atom. But when blasted loose by an atom smasher, their lifetime is only 0.000000000000002 of a second (a total of 15 zeros after the decimal point). This is approximately the amount of time that it would take light to pass an atom.

With this figure to work from, physicists will now be able to set up a sort of "lifetime" table for all the "elementary" particles of which matter is thought to be composed. At the moment, some 30 of these elementary particles are thought to exist.

r

Big unexplained gaps or pile-ups in the table would serve to indicate that something was missing or had not been reduced to its basic components. Nature has always exhibited an unfailing pattern or orderliness. There is no reason, physicists say, for believing that this is not also true at the primary level of matter and energy. Now they have

DEPARTMENT



RESEARCH...KEY TO MANY UGC OPERATING PROBLEMS

PROBLEM: Simplify recording of gas meter readings; expedite calculation of statements; save money. The problem exists in every gas company, electric company or water system.

SOLUTION: United Gas researchers develop tape recording device that eliminates old-fashioned route books, prepares tape ready for electronic computer.

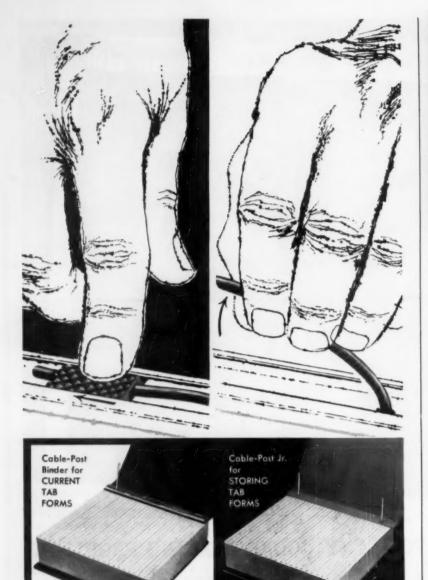
UGC INSTRUMENTS, a new division of United Gas Corporation, has developed and is now marketing numerous

electronic and mechanical aids for the gas and oil industry - each being the solution to a specific operating problem.

GAS*

SERVING THE GULF SOUTH

CORPORATION Headquarters, Shreveport, La.



Here's a \$610 value for \$400

Just to get introduced to you — These two binders are the best for marginal punched forms used with data processing equipment. Both binders have the same type of locking mechanism top and bottom. Just push the slides together. Up come the cable posts. Off come the covers. You can load from the top — unload from the bottom. When it is time to store the records, you change the covers instead of the sheets. Think of the time you save.

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BOTH	400

NATIONAL BLANK BOOK COMPANY Dept. 209, Holyoke, Mass.	uzliofizi.
Please send Cable-Post and Cable-Post Jr. Binders for \$4.00. Sample	sheet is attached or my
sheet size is	
My forms are bursted 🗆 unbursted 🗆	
Name	
Company	
StreetCityCity	State
My office supply dealer is	
*Offer expires Jan. 1, 1961	1180-29



EMILO SEGRE also of the University of California, Berkeley.

the lifetime of a pion as a baseline from which to work.

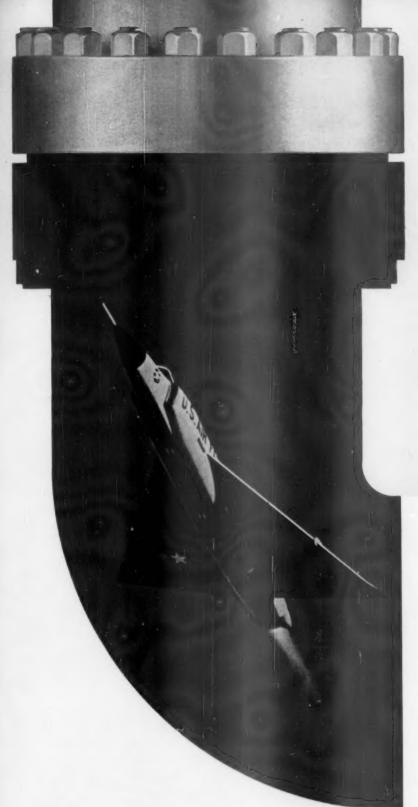
 New Particle—The two 1957 Nobel Laureates, T. D. Lee and C. N. Yang of Princeton's Institute for Advanced Study, suggest the existence of an entirely new atomic particle to explain how "weak interactions" (the push and pull forces between atomic particles) are transmitted.

Confusing theories about weak interactions have been troubling physicists for some time now. Discrepancies have been cropping up in all sorts of experiments, seeming to point to the fact that somehow, somewhere, the thinking about this kind of atomic force has gone awry.

Yang and Lee think the existence of a "W" particle might explain all the difficulties. They admit they have no experimental proof yet. Nevertheless, these two young Chinese-born scientists, whose revolutionary concepts in 1956 upset one of physics' basic foundation blocks—the law of "parity"—make a convincing argument for their latest hunch.

• Cooperative Results—A whole series of cooperative reports came from Russian, Italian, and U.S. laboratories to explain "strong" interactions between mesons (atomic particles with a mass between that of electrons and of protons) and nucleons (the general name given to any particle that is found in the structure of an atom's nucleus).

These studies, designed to chart the paths followed by particles in collision, would have been virtually impossible for any one laboratory to compile in any reasonable time. Their availability now, as a result of the combined effort of physicists around the world, should be an important addition to the fund of basic knowledge about certain common reactions at high energies.



MORE ENERGY... IN MORE FORMS... FOR AMERICA'S **GROWING NEED**

Jets streak across the sky powered by fuels piped across the land by Texas Eastern. And as more and more jet planes join America's commercial and military air fleets, Texas Eastern's Little Big Inch products pipeline grows significantly in importance.

Today, America's need for energy of all kinds is zooming. That's why Texas Eastern plans far ahead as it diversifies in the field of energy supply and enlarges its role as Pipeliner of Energy to the Nation.

TEXAS EASTERN

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TRANSMISSION CORPORATION

Shreveport, Louisiana



UNIVERSAL MATCH CORPORATION



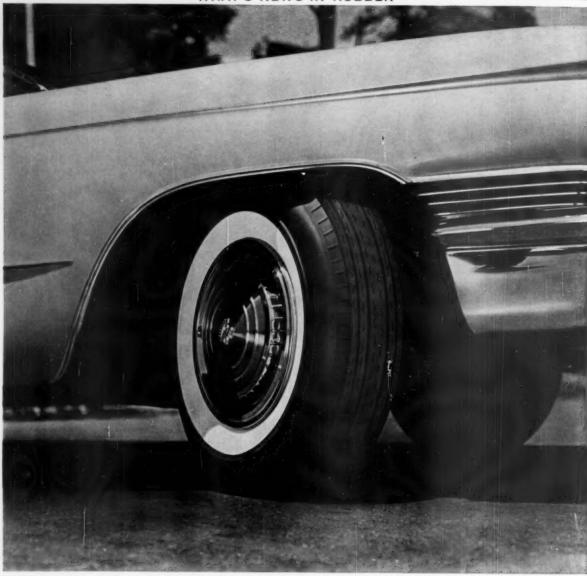
Subsidiaries: American Air Curtain Corp. • Customade Products Corp. • Ferguson Machine Corp. • National Rejectors, Inc. National Vendors, Inc. • Simmons-Woodward, Inc. • U. M. Acceptance Corp. • Universal Cabinet • Universal Metal Products Corp. Universal Properties, Inc. • Divisions: Match • Armament • Executive Offices: St. Louis, Missouri



This electronic device—a Currency Changer designed by one of Universal's Subsidiaries—is revolutionizing Automatic Merchandising. The customer inserts \$1 and \$5 bills and coins. The total deposit is recorded. Then the customer presses the button for the merchandise selected. And presto! The merchandise and correct change are automatically received. With uncanny accuracy, it will take genuine \$1 and \$5 bills, while rejecting counterfeit bills as well as foreign currency. For the vending industry, this machine opens unlimited horizons!

Vast new areas of merchandising are now a reality. Lack of change is no longer a deterrent to sales. For increasing sales of small items and for lowering the cost of handling already profitable ones, the applications of this Currency Changer are countless—and dramatic. It's the key to the fabulous future of Automatic Merchandising!

WHAT'S NEWS IN RUBBER



Turn to Butyl rubber for outstanding tires

More and more tire marketers are turning to Butyl rubber for tires with riding and safety benefits so distinct that they can be convincingly demonstrated in one short ride! Consider these advantages: (1) Stop up to 30% faster, for greater safety... faster on wet roads than ordinary tires on dry! (2)

Literally "soak up" bumps and vibration for smooth, quiet motoring pleasure; (3) Screech-free — even on sharpest turns! (4) Age and ozone resistant — Butyl tires keep their fresh, new tire look for years, even on unused spares! Enjay does not make tires. It supplies Butyl rubber to manufacturers of tires,

tubes, and hundreds of other products. For more information, write to: 15 West 51st Street, New York 19, N. Y.

EXCITING NEW PRODUCTS THROUGH PETRO-CHEMISTRY

ENJAY CHEMICAL COMPANY

A DIVISION OF HUMBLE OIL & REFINING COMPANY



MORE NEWS ABOUT



Enjay pioneers in new materials for many leading industries and offers customers an unequalled range of technical and processing experience. Backed by one of the world's largest research laboratories, Enjay provides complete technical service...from initial development to finished end-product.

OTHER ENJAY PRODUCTS FOR INDUSTRY

ADDITIVES. Enjay supplies a complete line of "prescription-balanced" additives to improve lubricants and fuels for today's cars. Examples: viscosity index improvers, detergent inhibitors and pour point depressants that help control motor oil flow under hot and cold conditions—and provide a new high in engine cleanliness and efficiency. New gasoline additives that reduce lead and carbon deposits, prevent stalling from carburetor icing and stop rusting in fuel tanks.

PETROCHEMICALS. Enjay, a pioneer and leader in the petrochemical field, serves industry with chemical raw materials for detergents, cosmetics, synthetic fabrics, plasticizers, inks, rubbing alcohols, anti-foaming agents, insecticides, herbicides and surface coatings, including the new Buton* Resins for primers in better surface coatings.

PLASTICS. Enjay markets Escon® polypropylene, a new plastic material for countless products made by molding or extrusion. Escon promises new and unusual applications in the packaging, household, appliance and automotive fields. The heat and chemical resistance of Escon, plus its high gloss finish, ability to withstand abrasion and hard usage, make it ideal for applications not possible before with other plastics.

ENJAY CHEMICAL COMPANY
A DIVISION OF HUMBLE OIL & REFINING COMPANY

In Research

Scientists Discover How to Measure Oxygen in Brain of Living Animal

A pair of scientific meetings last week reported significant developments in the fields of physiology, biology, and sociology.

At a meeting of physiologists at Palo Alto, Calif., it was reported that medical researchers may soon unravel the mystery of cardiac arrest and develop methods to combat it. Cardiac arrest is the medical term for the condition under which the heart stops beating—but not necessarily because of any disease or injury. Unless it can be put back into operation quickly, death or extreme brain damage result.

Formerly, scientists were unable to measure the amount of oxygen that normally exists in the brain and therefore were unable to determine precisely what the danger level was. Now, an oxygen electrode, the size of a small needle, is being used to measure the oxygen in the brain of a living animal. Important physiological findings should result.

Biologists at Stillwater, Okla., learned that a retired University of Wisconsin professor of horticulture, R. H. Rogers, has succeeded in extracting the substance that causes flowers to bloom. Rogers hasn't yet been able to identify the substance chemically. And there's no proof so far that it will be able to increase crop yields.

Work Begins on Powerful Telescope That Can Send Signals to Jupiter

Construction work has started on a mammoth \$5.5-million radio telescope south of Arecibo, Puerto Rico, under the auspices of the Air Force and the Defense Dept.'s Advance Research Projects Agency (ARPA). When completed sometime late in 1961, the giant scope (a parabolic antenna 1,000 ft. in diam.) will be capable of bouncing radar signals off Venus, Jupiter, and Mars. No other radio telescope, or comparable power, now exists.

There has been an increased interest in the development of new and larger radio telescopes in recent years (BW-Feb.13'60,p82). Much of it has been triggered by the need for tracking satellites and the demand for strategically placed powerful radar telescope facilities in case of war.

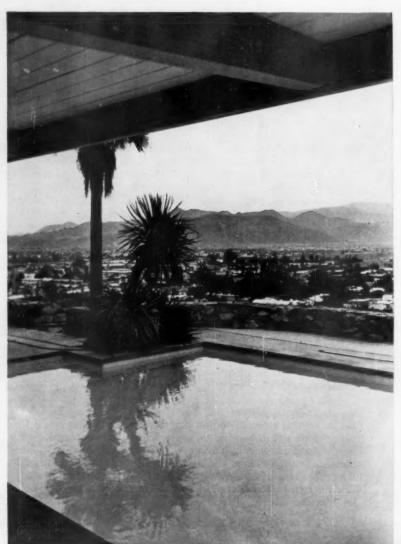
The Puerto Rican telescope should make it possible to determine how fast Venus is spinning, and what causes the unusually intense radiation belt around Jupiter.

Biggest Cosmic Shower Ever Detected

A huge cosmic shower over Alburquerque, N. M., last Dec. 3—the largest ever recorded—is providing new data on cosmic rays that may modify scientists' ideas on space travel. Within a period of only 10-millionths of a second, a shower of 10-billion atomic particles rained down on the cosmic ray detectors of the Volcano Research Station. Calculating backward, physicists were able to determine that the shower must have had an energy of 20- to 40-billion electron volts.



PALM SPRINGS An airborne visitor to the desert resort is greeted by a panorama of new, symmetrically arranged buildings—all part of boom that has hit the village. Below, a poolside view reveals the outdoor atmosphere of quiet luxury that attracts a half-million visitors each year.



REGIONS

Indians Hit P

Bob Hope calls Palm Springs, Calif., "the millionaires' sandbox"—probably as accurate a description as any for the small desert resort village that claims to vie only with Beverly Hills, Calif., as the richest city per capita in the U.S. Now, a new breed of millionaires has come into its own in the area—Palm Springs' native inhabitants, the Agua Caliente band of Indians.

The Agua Calientes—there are only about 110 of them—own about half the land in the area, but they have been land poor because their property has been bound up in law, red tape, and litigation. Now, the idle Indian land is the only room left for expansion. Under pressure, the legal bottleneck is gradually being broken.

• Boom Town—Around a half-million visitors flock to the village each year—to lie in the winter sun, relax in the dry desert air, golf on one of 12 courses, swim in one of the 2,300 pools, watch the polo matches, or hike through the surprisingly lush canyons. Some come as tourists, but many others have established winter or year-round homes.



it Pay Dirt in Resort Back Yard

Construction has kept pace with the town's growing popularity. Since 1945, builders have put up 3,475 homes. Assessed valuation has risen from \$8-million in 1945 to over \$65-million in 1960.

• Indian Land—Now that realtors are forced to look increasingly toward Indian land, the growth will go on, but probably more slowly. The Indians are closely protected by the Dept. of the Interior's Bureau of Indian Affairs, and are governed by a hard-bargaining tribal council made up of five women. Further, the crucial question of which Indian has title to what land is only now in the process of being settled.

Most of the slightly more than 31,000 acres in Palm Springs owned collectively by the Agua Calientes was awarded to them by the government in 1876 and 1877, when public conscience was growing over the plight of the Indians. The land was not granted outright to the Indians, but was put in trust for them. The property was to be administered by the Bureau of Indian Affairs.

In 1923 and 1927, the government



INDIANS

Three members of all-woman tribal council (center, below) of Agua Caliente Indians go over plans for commercial development of tribal lands in Palm Springs. Old slum areas on Indian land (above) are now being replaced by plush modern developments such as the \$2-million Palm Springs Spa (below, right).





does your advertising agency play the "management game"?



These men have just played the "Management Game" at IBM. As operating executives of make-believe corporations, they've spent the day struggling with cash flow, unit cost, production, inventory, plant maintenance, marketing, etc.

You'd think these men were promising business executives pointing for a presidency. The fact is they're creative people, seasoned Marsteller-Rickard advertising executives.

Why do we take time out to play the "Management Game" (and attend lectures, AMA seminars and the like)?* We do it because it makes us better businessmen. Because creating resultful advertising to industrial buyers demands not only creative talent but a knowledge of business generally. Finally, we do it because in becoming better businessmen, we increase our usefulness to clients as advertising men.

*In addition to attending financial lectures given by professional security analysts, we participate frequently in AMA seminars. In the past four years, 32 of our people have attended 43 sessions.

Marsteller, Rickard, Gebhardt and Reed, Inc.

ADVERTISING . PUBLIC RELATIONS . MARKETING RESEARCH NEW YORK . PITTSBURGH . CHICAGO . TORONTO

. . . Mayor Bogert predicts 90% of available Indian land will be developed through lease . . .

(STORY on page 86)

twice attempted to portion out land to individual Indians. Each Indian was to receive a total of 47 acres on which to live, grow crops, and graze his animals. Not all the Indians chose to select lands, however, and, later, some Indians complained that the allotments, though equal in size, were unequal in value.

Finally, in 1959, after nearly 30 years of litigation and court decisions. Congress passed a bill that provided for equalization of allotments. The bill set aside certain lands to remain as tribal property and directed that the rest be divided among the 104 Indians living at that time, so that each allotment would be as equal in value as possible.

Appraisals have shown that allotted lands now range in value from \$76,000 to \$650,000, and the value of tribal lands totals \$12-million. Thus, the highest equal figure possible is estimated at \$335,000. Indians who have been allotted land worth more than this may keep it. Others may draw from tribal lands to attain this figure.

• Purchase Problems—The problem of acquiring Indian land remains a tricky one. Most of the land is still held in trust for the individual Indian by the government, and its sale or lease must be approved by the Bureau of Indian

Palm Springs Mayor Frank Bogert, who is also a realtor, predicts that 90% of the available Indian land will be developed through lease rather than sale. He points out that only 15 of the 34 adult Agua Calientes are eligible to apply for a clear title. Further, purchase through the bureau is difficult because an acceptable bid must equal or exceed the appraised value of the land, which is not disclosed prior to bidding.

• Leasing Favored—Both the Indian Bureau and the Indians themselves favor leasing rather than selling, according to Raymond W. Jackson, director of the Indian Bureau's Palm Springs office. Leases provide for the best possible use of the property and guarantee a steady income. Congress has made leasing more attractive by lengthening the Agua Caliente lease privileges from 25 to 99 years.

Under the new law, the Agua Calientes signed the first 99-year lease with Palm Springs Spa, Inc., for an 8-acre plot in the center of the village. The developers, Chicago and Los Angeles



ACCORDION DOORS







LIPSTICK BASES



LUGGAGE LOCKS

HOW TO CUT COSTS, BOOST PRODUCT APPEAL WITH THOMAS STRIP PRE-COATED STEEL

please turn page



BATTERY CANS





Pittsburgh Steel Company

Luggage Locks-Brass Coated strip "strongly helped us compete against low-cost, brass plated imports. That's acclaim John A. Long, vice president-general manager, Long Manufacturing Co. Inc., gives Thomas Strip's brass coated steel. Long, of Petersburg, Va., is the nation's second largest luggage hardware maker. It was hard hit by foreign-made brass locks. "It was a crucial time in one of our big markets," says Sales Manager Edward C. Coleman. "We started looking for new methods and materials. Now, with new designs and using Thomas brass coated strip, we're able to fight foreign competitors." Eliminating plating and hand polishing with brass coated strip, buffed and lacquered on one side, Long trimmed 11 production steps. Result: 50% cost saving on compact-type luggage lock. Thomas Strip maintains product quality, helps Long increase die life; clear lacquer coat acts as lubricant in forming, prevents galling, and preserves product finish in inventory and in handling.



THOMAS STRIP: TRIMS METAL COSTS, SAVES PRODUCTION STEPS, UPGRADES PRODUCTS

Metal fabricators get a head start toward material and production savings with Thomas Strip's coated steel specialties.

Combining the beauty and utility of costlier metals with the strength, economy and formability of steel, Thomas Strip also offers greater product versatility, durability, buyer appeal and design potential.

Here are benefits available to you in Thomas Strip:

• Shortens Manufacturing Cycle—Precoated Thomas Strip is ready to fabricate when it's delivered. Initial preparation, cleaning, buffing, final finishing are already done in many cases—you're steps ahead in production.

 Provides Economy of Steel— By replacing more expensive metals, but retaining their finish or functional properties, precoated Thomas Strip reduces material costs.

 Fabricates Easily—Electrolytically applied, hot-dipped, painted or bonded, Thomas Strip coatings endure fabrication as readily as easyto-work base steel.

• Cuts Plating Costs—Serving as final finish or as base for further plating or painting, Thomas Strip eliminates or at least reduces fabricators' piece-plating expense.

• More Pieces Per Pound— Precision rolling and plating to extremely close tolerances give maximum yield in parts per pound.

A study of the experiences of Thomas Strip users pictured on these pages should convince you of the benefits available to your product application—or to that product idea in the back of your mind. Read them.

If you need more convincing, detailed literature and samples are yours for the asking.

Better yet, contact one of the Thomas Strip District Sales Offices on the last page and ask for engineering or design help. And tell them you'd like to see our new slide film, "Bright, Modern Metals Provide Proof of the Pudding."

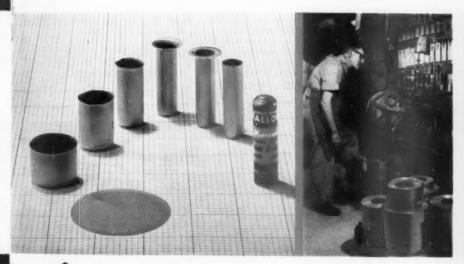
Accordion Doors—Plastic Coated Thomas Strip replaced hand laminating for "lead rail" of STEELITE plastic folding doors made by Clopay Corporation, Cincinnati, Ohio. Strip is roll formed with six 90° bends, ribbed and punched for rivets and door handle. Plastic endures stretching and compression. Also maintains "perfect lamination" to pass 100% inspection, says Purchasing Agent Lewis H. Washburn. Formed rails (left foreground) are assembled on rivet bench.

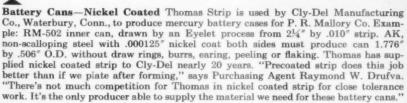


Boiler Tops-Lacquered Strip is spun formed by Edwards Engineering Corp., Pompton Plains, N. J., for boiler tops and top collars in packaged heating systems. Lacquer coat on Thomas Strip's aluminum-killed, drawing quality steel adheres without chipping or peeling. Edwards also uses lacquered strip to roll form back plates and front shields for baseboard units. Purchasing Agent John Bush says: "Thomas is more flexible and cooperative in giving us a quality product. We cut six steps, gained 1,500 sq. ft. of work space and eliminated fire hazards when we switched to prepainted strip. But most impor-tant, we can custom cut baseboard units to extra long lengths from prepainted coils." Edwards buys .029" strip lacquered white on one side in 10.500" and 5.625" widths; 23" width, beige lacquered on two sides.









Lipstick Bases—Copper Coated strip means a $\frac{2}{3}$ material cost saving for Truelove & Maclean, Inc., Waterbury, Conn., Eyelet stampings specialists. Normally a brass part, a single style of this drawn shell, is produced at rate of 5 million yearly. Firm buys AK, non-scalloping, close gage $(\pm .0005'')$ copper coated Thomas Strip for ductility, die lubricating and finish plating properties. Co-owners Tom Truelove and Don Maclean say: "We wouldn't attempt some of these jobs unless the material was copper coated steel. Generally it's no harder to work steel than brass when the steel is Thomas Strip's copper coated. There's not much competition for Thomas in this line." (Top photo shows copper coated lipstick bases being packaged with magnetic lifter.)



PATTERN ROLLED STEEL OFFERS UNLIMITED DESIGN **OPPORTUNITIES**







Home Mailboxes-Pattern Design. The Lady was looking for product appeal. She found it in pattern design sheet from Pittsburgh Steel Co. The Lady is Miss Jeanette L. Troy, director of purchases for The Randall Co. of Cincinnati, Ohio. She explains: "We were trying to find something new for our colonial style home mailboxes-a decorative effect that was different. Pittsburgh Steel's Pattern Design No. 101 gave us the appeal boost we were looking for-and without a proportionate cost boost.

Randall, a division of Textron Inc., produces the boxes for another Textron division, Wagner Manufacturing Co. of Sidney, Ohio. Industrial Engineer Wade Hartman says pattern design sheet saves 50 cents over a mailbox made of similar patterned materials. Rolled-in leather design shows no distortion in forming; permits full thickness of steel to be used in blanking, forming machines. Randall buys pattern sheets in commercial quality .024" thick and in widths 395%", 401/4", 427/8".

Cabinet Hardware-Pattern Design-Thomas Strip's antique patterned steel helps Ajax Hardware Corporation of Los Angeles build strength and beauty into Early American cabinet hardware. President Norman D. Louis says: "Thomas Strip saves many hours by eliminating production steps. The uniformity of appearance, quality and workability of Thomas Strip's patterned steel makes it possible to match Ajax Early American cabinet hardware year after year. Production is fast because of Thomas Strip's close tolerances and formability." Ajax Hardware gives Thomas Strip's uncoated strip an electrolytic coating of rich antique copper or dull black. Photo shows packaging operation.

THOMAS STRIP DIVISION

Pittsburgh Steel Company

Grant Building • Pittsburgh 30, Pennsylvania



The STEELMARK on a product tells you it is made of steel. Look for it when you buy.

DISTRICT SALES OFFICES

Atlanta Chicago Cleveland Dayton

Detroit Houston

Los Angeles New York Philadelphia

Pittsburgh Tulsa Warren, Ohio



... land sold for \$5,000 an acre in 1957 is now worth as much as \$50,000 an acre . . .

(STORY on page 86)

businessmen Samuel W. Banowit, William Leeb, David Dimsdale, Victor Nemeroff, and Joseph H. Everston, have constructed a \$2-million spa on the property, utilizing natural hot springs. They also plan to build a hotel, shops, and offices there.

In all, the bureau has granted nearly 50 commercial leases in the last two or three years. And so far, about 1,000 acres of Indian land have been sold. Among developments on their parcels are the posh Palm Springs Riviera Hotel, the City National Bank, the Desert Skies Hotel, and the Racquet Club Estates, a home development

• Land Values Soaring-Land values have skyrocketed. Bogert reports that a tract of land he bought at \$2,500 an acre in 1956 and sold for \$5,000 an acre in 1957, is now worth as much as

\$50,000 an acre.

No one is worrying about depressing these land values as Indian land comes on the market. For one thing, developers report that bureau appraisals-which must be met-are high enough to avoid problems. For another, Jackson points out that the bureau is moving cautiously, offering land slowly-and there's no end to the Palm Springs boom in sight.



Atom Plant Warms Up

Last week Yankee Atomic Electric Co.'s atomic powered generating station in Rowe, Mass., went critical. A selfsustained chain reaction was achieved within the reactor core, where splitting uranium atoms will provide heat for producing electricity. Electric power is slated to start flowing this fall.

are you interested ...



These districts are complete—with all utilities, paved streets, and trackage, for immediate use. Thus, you are relieved of the burden of preparing the site before you proceed with plant construction.

districts available in the eleven-

state western territory it serves.

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Industrial Development Department



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NATIONAL FISH 'N SEAFOOD PARADE

October 17-23



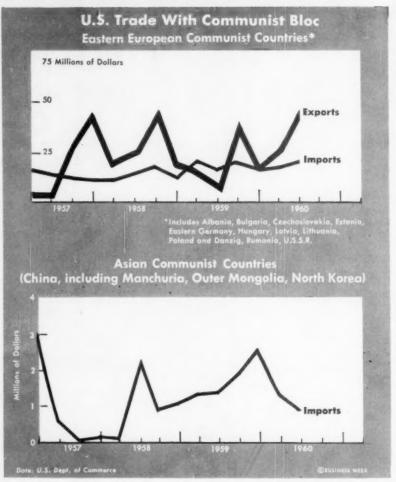
The food that comes from the sea is one of the tastiest ingredients in the nation's diet. And Fish'n Seafood Week will give you the chance to promote bigger sales of your products. Plan to boost your baked goods, drinks, sauces, everything you sell that people enjoy with fish. For full tie-in details, write National Fish'n Seafood Parade Committee, 1614 20th Street, N.W., Washington 9, D.C.

And remember, the products you make, process, or pack, can be sold so much better in fine folding cartons by Gair!



CHARTS OF THE WEEK

U. S.-Soviet Bloc Trade Grows



Despite the increase in cold war tensions following the summit collapse last May, trade between the U.S. and Soviet-bloc countries nearly equaled postwar highs in both imports and exports in the second quarter. U.S. exports to the Soviet bloc reached \$45-million in the three months, April through June, contrasted with only \$10-million in the second quarter of 1959.

Grain shipments to Poland accounted for approximately one-third of the total. Poland has been the best customer of the U.S. in the Communist bloc since 1957 when the two countries signed a \$96-million loan agreement providing for Polish purchase of U.S. machinery and surplus farm goods. During 1958, the record year in postwar trade between the U.S. and Soviet bloc, almost 93% of the \$113-million in goods shipped went to Poland.

The Soviet Union has imported substantial quantities of U. S.-made industrial chemicals, iron and steel mill products, and metalworking and textile machinery. Exports of industrial machinery and parts continued through June of 1960, despite the fact that Russia does not observe international patent rights (BW-Jan.2'60,p69). The surge in Soviet imports of U.S. textile and shoe machinery is evidence of the increasing attention being paid to consumer goods. Russia bought \$3.5-million worth during the first five months of this year, compared to \$3.7-million for all of 1959, and only \$6,201 in 1958.

Meanwhile, the U.S. has been buying meat, furs and hides, coal tar products, precious metal jewelry and plated ware, ferroalloy ores and metals, and other commodities from the Soviet bloc. This trade totaled \$80-million last year, and \$41-million in the first half of 1960.

Trade with Communist China and its satellites has been negligible as a result of the 1950 Korean War embargo on exports, still in force, and Washing-



"Pinkerton's screen their guards much more carefully than we ever did."



PINKERTON'S, THE WATCHWORD FOR BUSINESS AND INDUSTRY

With over 100 years' experience, and by far the largest organization, Pinkerton's can provide the effective, economical security service required by modern businesses under today's conditions. Effective, because it is expertly supervised. Economical—often 20% below the cost of maintaining your own security guard—because Pinkerton's surveys your needs and tailors security measures to meet them, including, when possible, the latest electronic protective devices as well as trained, supervised guards. For further information, send for our security brochure.

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"Expanded distribution

without warehousing with Delta Air Freight"



Armour Pharmaceutical Company eliminates warehouses by airlifting area shipments to regional centers where pre-labeled and postage-paid packages are speeded to individual customers.

"Drug shipments need expensive refrigerated warehousing and special handling as a rule," comments W. F. Sheehy, Transportation Manager. "We eliminate this requirement by using Delta Air Freight and serve our customers faster and better. A 9-state shipment, for example, can be flown to Atlanta where individual packages, already pre-labeled and stamped, fan out to our customers in a fraction of the former time."

Profit from Delta's BIG PLUS



Delta operates all-cargo flights and in addition carries freight on every passenger flight, including Jets. All-cargo flights serve Atlanta • Chicago • Cincinnati Charlotte • Dallas • Houston • Miami New York • New Orleans • Orlando Philadelphia • Detroit • Memphis

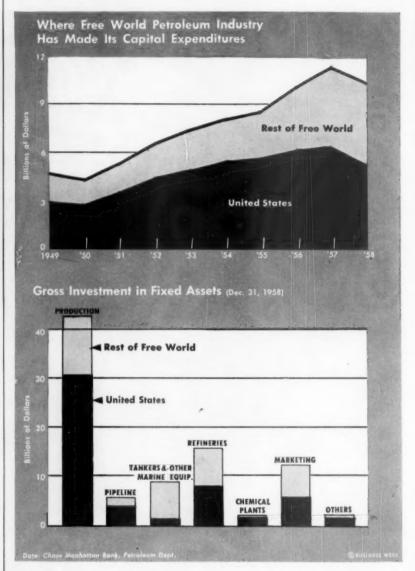


GENERAL OFFICES: ATLANTA AIRPORT, ATLANTA, GA.

ton's non-recognition of the Peking government.

The bulk of U.S. imports has been confined to unmanufactured wool (more than \$5-million in 1959), furs, art works, and antiques. Exports

have been limited to printed matter under general license and shipments to diplomatic missions of friendly countries. These have been so small (only \$3,000 in 1959; none in 1960) they would not show on the chart.



U.S. Attracts Less Oil Money

In 1958, for the first time on record, the U.S. got less than half of the funds invested by the free world's petroleum industry. An analysis of financial and operating data prepared by the Chase Manhattan Bank reveals that of the \$10.7-billion spent in 1958 for replacement and expansion of property, plant and equipment, only \$5.3-billion, or 49.5%, went into American installations, compared with a high of \$6.4-billion the previous year, and as much

as 68% of total free world spending in the oil industry during 1951.

During the decade, 1949-58, almost \$48-billion was invested in the U.S. oil industry; more than 61% of the free world's total spending. Of this, more than \$34-billion went into U.S. production operations.

By the end of 1958, the U.S. contained within its borders almost 60% of the free world's petroleum industry's gross investment in fixed assets.

The Rust-Oleum NEW COLOR HORIZONS SYSTEM stops rust and provides lasting beauty



Homeowners rely upon colorful Rust-Oleum coatings to protect tools, pipes, tanks, fixtures, metal sash, equipment, etc.



Colorful new beauty for your lawn furniture is yours with a flick of the finger with the handy new Rust-Oleum self-soray containers.



Rusty bikes, for example, can be snapped back to sparkling new life with a Rust-Oleum touch-up in a choice of many colors.



From porch railings and ornamental iron to playground equipment and screens colorful Rust-Oleum coatings do the job.



Rust-Oleum coatings assure maximum protection and smart, modern color harmony for plant interiors and machinery.



Gutters peeling? New or old, unpainted galvanized metal gutters, roofs, vents, ducts, etc.,need Rust-Oleum Galvinoleum**protection.



Construction equipment users help defeat Old Man Weather with Rust-Oleum Speedy-Dry coatings in a broad range of colors.



Long-wearing Rust-Oleum coatings beautify and protect costly water tanks to lower maintenance costs for industry and municipality.



Major trucking lines and carriers rely upon Rust-Oleum's bright attractive colors to resist weathering, abrasion, and road grime.



Apply Rust-Oleum 769 Damp-Proof Red Primer over the sound rusted surface after scraping and wirebrushing rust scale and loose rust away. Specially-processed fish oil vehicle penetrates rust to bare metal. Follow up with desired Rust-Oleum top coat color to beautify as you protect.

RUST-OLEUM.

Homeowners—Rust-Oleum is featured in brush and spray containers at your nearby hardware, paint, lumber

Industrial users - prompt delivery is assured from Industrial Distributor stocks in all principal cities of the United States and Canada. STOPS RUST!



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Rust-Oleum is distinctive as your own fingerprint



There are imitations, but only one Rust-Oleum



His pencil writes financial plans with a local point of view

What comes out of a pencil depends on the man who's holding it.

When the pencil's in the hand of the banker from Chemical New York, it writes with a local point of view. Because the man at the thinking end knows your part of the country as well as he knows Wall Street.

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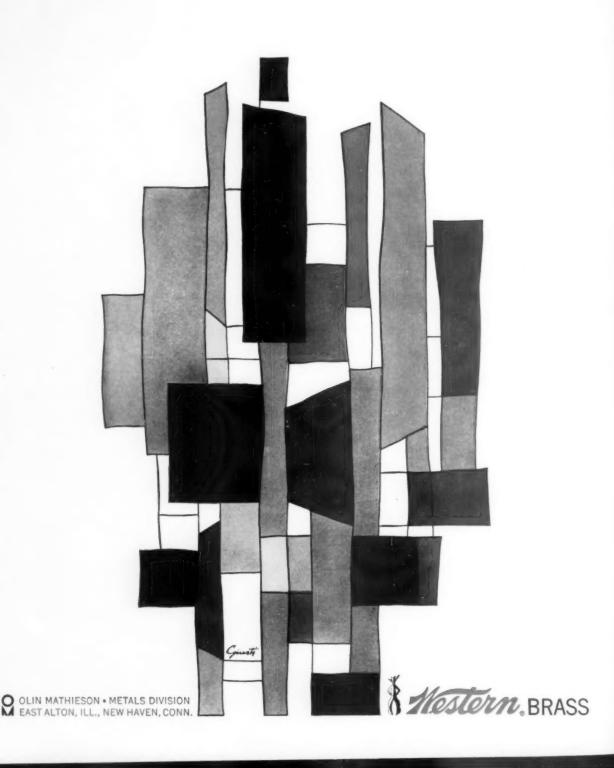
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BUSINESS ABROAD

World Bank Plays Peace Broker

It's settling international disputes by persuading individual countries to put economics ahead of politics.

On Monday, a small group of high officials, well known in the world of international finance but virtually unknown to the general public, will get together in Paris to discuss a momentous subject. They will talk about raising some \$55-billion over and above the originally anticipated aid that the Indian government needs to carry through its third Five-Year Plan (beginning next April).

The participants in this discussion will be key officials of the U.S., the United Kingdom, West Germany, Canada, and Japan. Newly appointed Asst. Secv. of State for Economic Affairs Edwin M. Martin will represent the U.S. They will meet in the Paris office of the World Bank, under the chairmanship of World Bank Vice-Pres. J. Burke Knapp, at the invitation of the Bank.

Next month, the World Bank will call together in Washington a similar group—probably representing most of the same nations and perhaps some others—to consider how much additional outside assistance Pakistan will need for its ambitious second Five-Year Plan, and who is going to put up the money.

Last week, World Bank Vice-Pres. William A. B. Iliff (right) presided at the initialing in Washington of the historic agreement between India and Pakistan on the division of the waters of the Indus River system. Iliff, World Bank Pres. Eugene Black, and other World Bank officials had labored through nine years of tedious and delicate negotiations to bring about this agreement (BW—Sep.3'60,p29). It clears the way for a \$1.3-billion 10-year program to be supervised by the Bank for the diversion and development of the six rivers making up the Indus system. Some 47-million people will benefit

• New Diplomacy—These are three current examples of a unique type of diplomacy developed by that unique institution, the World Bank, to meet the common underlying—but often superficially clashing—interests of its 70 member nations, in an age of economic, social, and political revolution.

Black calls this new diplomatic art "the diplomacy of economic development" in a book of the same name to be published by Harvard University Press this month. Black's thesis is that science and technology have forced human societies into an unprecedented, dangerous, and uncomfortable intimacy and at the same time have fostered an immense increase in man's sense of power over his fellow men.

I. Forced Intimacy

Development diplomacy is a new and tentative art, as new as the forced intimacy among all the nations of the world and as new as the World Bank, which has been one of the most important and successful responses to the problems posed by that intimacy.

• Rules—An absolute prerequisite for the successful functioning of this new brand of diplomacy is that individual governments, or groups of governments who are party to an international dispute, be willing to consider problems on their economic, social, or engineering merits—rather than as primarily political problems.

In a world whose deepest challenge is to maintain and evolve constructive cooperation between rich and poor nations and to narrow the material disparity between them, economic problems are increasingly the central problems. Thus, any reasonably optimistic assumption about the future of the world leads to the conclusion that development diplomacy as evolved by the World Bank-and the Bank itself-will become an increasingly important factor in the world balance of hope and power. As James Morris of the Manchester Guardian said in a recent article about the World Bank, the Bank has "the smell of the future to it.'

• Potential—Against this background, it's worth looking at the major international diplomatic missions that the World Bank has undertaken—both the successes and the failures—to get an idea of the possibilities and limitations of development diplomacy.

Organization of the consortium of nations to help India is an example of one basic type of diplomatic mission that the Bank is almost perfectly suited to perform.

Next week's meeting in Paris is the sequel to a crash diplomatic operation launched by the Bank in August, 1958. At that time, India's meager foreign exchange reserves were bleeding away at a fast rate.

Black saw that if drastic action weren't taken, India would be bankrupt within months or even weeks, and the huge investment of the Bank



WORLD BANK Vice-Pres. William Iliff negotiated agreement between India and Pakistan to share waters of the Indus.

and leading industrial nations in India's political and economic future would go down the drain.

Black hastily summoned representatives of India's main creditors to a meeting in Washington. There, an agreement was hammered out to raise \$300-million in additional foreign exchange to tide India over the crisis. The Indian government did its part by instituting Draconian economy measures. Subsequent meetings of the consortium led to further joint assistance, which has made it possible for India to achieve the minimum goals of the second Five-Year Plan without going broke or resorting to dictatorial measures.

The Bank can bring to bear upon any problem not only massive financial resources of its own but the largest and most high-powered pool of economic and technical experts in the world. Its headquarters at 1818 H Street in Washington houses an international staff that can tackle any problem from or-

In industry today no blueprints for new construction, no plans for remodeling can ignore the concept of traffic flow as an integral function of architecture. One of the boldest expressions of this idea in years is the American Air Curtain.



The American Air Curtain...a doorway that's sealed against heat or cold, dust or fumes—against everything but people and products! A gentle curtain of air thermostatically controlled, separates and insulates areas having different temperatures, atmospheric pressures or humidities. In industry today applications of the American Air Curtain are dramatic. Any type of operation can be confined to its own area, unaffected by the traffic of men and machinery. It's the boldest innovation in architectural engineering in years: the closed door that's always open.

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472 PAUL AVENUE . ST. LOUIS 35, MISSOURI A SUBSIDIARY OF UNIVERSAL MATCH CORPORATION ganizing a farmers' cooperative to building a steel mill or helping a country balance its international payments.

II. Seven Men in One

Black has said that an all-around development diplomat should be a philosopher, an economist, a historian, a civil engineer, a geographer, anthropologist, and social psychologist rolled into one. Collectively, World Bank staffers meet those specifications.

Among the bank's trouble shooters who have poured skill, tact, and money on troubled waters around the world are:

William Iliff, Black's righthand man, former British civil servant with wide experience in the Middle East, who wetnursed the Indus settlement.

Henry Labouisse, a graduate of the State Dept. and former chief of U.N. assistance for Palestine refugees, who now is in New York on loan from the Bank directing the U.N. economic assistance program for the Congo.

assistance program for the Congo.

Lt. Gen. R. A. "Spec" Wheeler (Ret.), former head of the Army Corps of Engineers, who built the Burma Road, reopened the war-wrecked Sucz Canal, and now is directing U. N. efforts to reopen the silt-clogged port of Matadi in the Congo.

III. Failure and Success

Despite the success of the Indian aid consortium, Bank officials are wary of getting involved in too many operations of this type. There is danger of overstraining the Bank's technical facilities and of consulting so much that nothing will get done.

Two diplomatic missions that failed illustrate the basic limitation of development diplomacy.

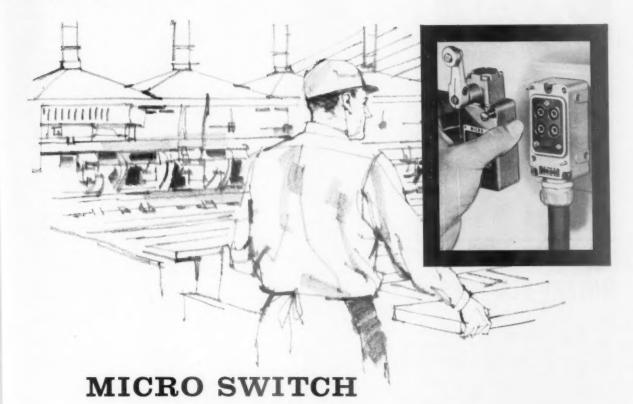
The Bank failed in 1952 to mediate successfully the bitter dispute between the United Kingdom and Iran after Iranian Premier Mossadegh nationalized the Anglo-Iranian Oil Co. Political passions on both sides were running too high at that stage of the dispute to permit reducing it to an economic and technical problem.

Likewise, the U.S., U.K., World Bank aid package to build the Aswan High Dam in Egypt, which the Bank had played a key part in tying together, was torn to pieces in the political grappling between Pres. Nasser and John Foster Dulles that culminated in the Suez crisis.

Black was as stunned as anyone when Dulles suddenly withdrew U.S. support from the project at the moment when the Egyptian Finance Minister was on his way to Washington, reportedly carrying crucial Egyptian concessions. But he maintained good personal relations with Nasser throughout the ensuing storm, demonstrating dramatically the



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flexibility and usefulness of the "above the battle" sort of diplomacy that the Bank can conduct.

When all passions were spent, Black in his personal capacity was able to mediate successfully between the Suez Canal Co. shareholders and the Egyptian government and between Nasser and the British government to clean up the economic debris left by the war. This led ultimately to resumption of diplomatic relations between Britain and the United Arab Republic, and a resumption of normal trade and aid relationships between the UAR and the West, thus forestalling complete UAR economic and political dependence upon the Soviet bloc.

· Bank's Day-The Indus agreement, of course, is the Bank's most brilliant diplomatic triumph to date. In September, 1951, Black wrote to the Prime Ministers of India and Pakistan offering the Bank's good offices in negotiating an agreement on the sharing of the waters of the Indus River system. This had become a matter of bitter dispute between the two countries as a consequence of the partition of 1947, and threatened to lead to actual warfare.

Black specified that the negotiations must be conducted on an exclusively economic and technical basis without regard to past or present political positions of the two countries. But it took nine years of patient probing by Black and Iliff to drain the political venom out of the dispute.

During the first two years of joint talks in Washington, each country put forward elaborate proposals that were unacceptable to the other side. In 1954, Iliff suggested cutting the project in half-alloting the waters of the three western rivers of the system to Pakistan and the three eastern rivers to India. India accepted in principle, but Pakistan objected that the plan made inadequate provision for water storage. India suggested various schemes for meeting this problem but all of them allowed for of the river system in India-"tap" which Pakistan wouldn't stand for.

Three more years of wrangling fol-lowed. By 1957, relations between the two countries hit bottom. Temporary water allotment agreements negotiated by Iliff had expired. The two delegations were hardly speaking to each other, and India was threatening to divert the eastern rivers on its own, leaving Pakistan high and dry. Both nations were fortifying key parts of the frontier.

Iliff desperately tried another tack: talking to each side separately and privately. But the deadlock remained.

In May, 1958, Black stepped in again and, with Iliff, flew to New Delhi and Karachi. In tense, face-to-face talks with India's Nehru and Pakistan's new strong man leader Ayub Khan, Black

extracted an agreement on certain general principles-pleasing to neither side -that should govern a settlement.

The details were filled in during another 15 months of negotiation, and victory finally was achieved last week.

Two things helped bring success. First, the political weather had cleared, making it possible to deal with Indus as an economic problem. Ayub Khan's bloodless coup d'état had given Pakistan a government strong enough to resist the temptation to use the Indus dispute to whip up lagging internal political support. Mounting Red Chinese truculence on the Indian frontier had put Nehru in a mood to mend political fences with his northern anti-Communist neighbor.

• \$20-Billion Speaks-Equally crucial was the fact that the World Bank was able to raise more than \$700-million from its own resources and those of six Western nations to pay for the Herculean task of moving three big rivers from their beds to implement its proposed agreement.

Although skill, tact, and impartiality are essential to the Bank's role as international peacemaker, its whopping bank account is what gives real weight to its advice. One Bank official says:

The secret of our success as diplomats? It's quite simple really: We sit down at the table with a great deal of good will, our share of good sense, and \$20-billion." Since 1946, the Bank has loaned out about \$5-billion for projects ranging from dams to railroads.

The Bank's influence as honest broker to the world has not been limited to major international crises. For example, it also has acted as the catalyst in bringing together public and private capital for major development projects such as the giant Kariba dam in Rhodesia and the current proposed Volta River project in Ghana.

IV. Not a Monopoly

Black and his officials, however, don't seek any monopoly in the field of development diplomacy. Recently, the U.N. Special Fund has been increasingly active in the survey aspects of international development. The Bank has completed a survey for the Special Fund of the power needs and potential of Argentina. For the fund, it's also surveying Argentina's transportation needs, the possibilities of a dam on the Niger, and silting problems in the ports of Bangkok and Georgetown, British Guinea.

The future potential for the Bank's development diplomacy looks as big as its past accomplishments. It already is looking into a regional development bank for Central America. And three major rivers-the Jordan, the Nile, and Southeast Asia's Mekong-invite further

development. END

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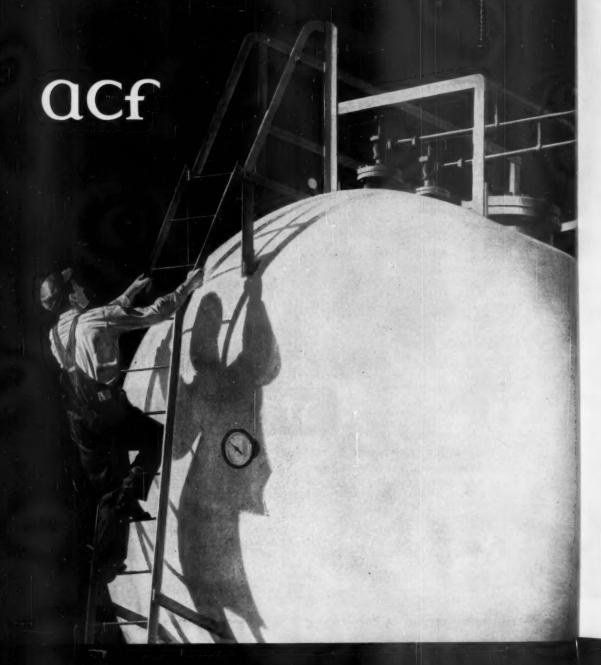
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In Business Abroad

Russia Charters British Tankers To Carry Oil From Black Sea

The Russians this week chartered British ships to transport Black Sea oil. This is the first shipping agreement the Russians have reached with a Western company since July.

At that time, Standard Oil Co. (N. J.) announced that, when placing orders for shipping oil, it would "take into consideration" whether ship owners had carried Russian oil. The warning followed Fidel Castro's seizure of foreign oil refineries in Cuba.

Cambridge (Tankers) Ltd. and London & Overseas Freighters Ltd. are the British companies involved. A spokesman for Cambridge refused to reveal the quantities to be carried, period covered, destinations, or rates fixed, terming such details "trade secrets."

One rumor circulating in London has it that the agreement is to transport 1-million tons of oil over a two-year period, at almost double the current rates. Although this estimate is discounted by most brokers, they agree that the Russians are paying an "attractive" price.

Moscow reports that six Russian tankers are carrying oil to Cuba, probably on a regular basis. In Havana, the Cuban government is reported to be satisfied with Russian deliveries.

Communist Chinese Take Over Swiss-Owned Aluminum Mill

The Communist Chinese government has taken over what is believed to be the last foreign-owned industrial enterprise in China.

In Shanghai, the Reds have acquired the Chinese Aluminum Rolling Mill, a subsidiary of Aluminum Industrie AG (AIAG), of Switzerland. After a year of negotiations, Chinese authorities agreed to pay the Swiss company in foreign exchange for part of the mill's value. AIAG has long since written the plant off as a loss.

There now remain only a few Western import-export firms in Shanghai and Tientsin, all most likely on their way to liquidation.

Argentine Economy Still Hampered By Budget and Foreign Trade Deficits

Argentina's economic stabilization program has hit some snags.

Economy Minister Alvaro Alsogaray has announced that the government budget deficit for the year ending Oct. 31 will be \$48-million. Last June he estimated the deficit would be only \$10-million. Alsogaray says a "technical hitch" in the plan to return Argentina's ailing transport system to private ownership is the cause.

Efforts to reduce the foreign trade deficit are also not

meeting with success. Imports exceeded exports by \$25.8-million during the first half of this year. Although Argentina has favorable balances with several nations, it ran a \$94.8-million deficit in trade with the U.S.

Castro Grabs More U.S. Businesses And a Nationalist Chinese Bank

Fidel Castro's government in Cuba this week continued its mopping-up operation against private-especially U. S.-enterprise.

The revolutionary regime seized three tire-manufacturing plants worth about \$25-million, owned by U. S. Rubber, Goodyear, and Firestone. A fourth company was not taken, because 80% of its stock is held by a Mexican company.

The government also grabbed control of a 20-store supermarket chain estimated to be worth \$5-million. The Minimax stores had been operated by Americans in Havana.

Following its recognition of the Communist Chinese government, the Cuban regime seized the Nationalist Chinese Bank of China. Castro also dug further into Cuban private enterprise when he ordered the takeover of Luis Mendoza & Co., a large sugar brokerage.

The revolutionary government is wiping out signs of foreign ownership of the three oil refineries it seized in July (BW-Jul.2'60,p72). The distinctive colors and advertising marks of Esso, Shell, and Texaco have been replaced with the green and white signs of the Institute of Cuban Petroleum.

First Government Chimney Sweep Goes Into Competition in Britain

Great Britain's first nationalized chimney sweep has begun work.

The North-Western Div. of the National Coal Board

has appointed Edward Hayes (picture) to work in the Manchester area because, the board claims, some of the 300,000 customers have complained of a shortage of sweeps. Hayes will work in white overalls, drive a white van, and use vacuum cleaning equipment.

The nationalization is not without opposition. Says a private sweep: "This statement about the lack of sweeps is just a lot of nonsense. The opposite is the truth. Most chimney sweeps have to canvass for trade."

Groans another private sweep: "This is almost certain to ruin me. I have only a bicycle."



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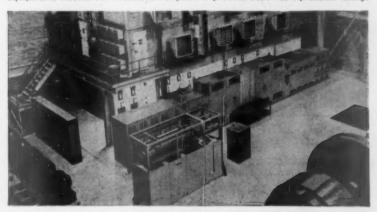
For the primary metals industry, installations of Westinghouse PRODAC* (programmed digital automatic control) have improved product quality and mill functions, as well as monitoring all phases of the product and process by data accumulation systems.

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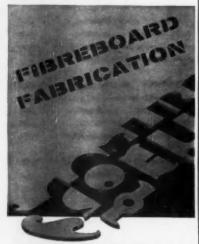
PRODAC control computers are designed to work in unison with conventional control equipment. Result: full automation of plant or process becomes a practical reality.



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MANAGEMENT

A One-Man Control of the A One-Man Control of

Erwin S. Wolfson has made a fortune in real estate by relying on his own judgment and genius for making deals, and has no thought of abandoning his one-man rule.

The elevators serving the upper floors of 529 Fifth Ave. are unique in one respect. Push the right button and a little glass panel over the sliding doors lights up with the name of Erwin S. Wolfson (cover and right).

It might be one of the small pleasures of his life, but Wolfson pushes button No. 20 every morning about 8:30 and doesn't even glance up. He

knows where he's going.
Up on the 20th floor, through a glass door off the lobby that also carries his name, untitled and unexplained, Wolfson heads down a narrow corridor to an unlabeled office at the northwest corner of the building. The 9-ft. tabledesk reaching out to the center of the room, a couple of contemporary paintings on one wall, and a few bits of sculpture stuck here and there, make it his. But so is everything else on the 20th floor.

· Multiple Holdings-The windows don't offer much of a view, but then, Wolfson rarely bothers to look out. He doesn't have to. In his mind, clearly enough, are the sights that satisfy: two big office buildings and a couple of management companies that he owns outright, and five other substantial properties in which he holds a large interest.

Just up Fifth Avenue a few blocks is Diesel Construction Co., Inc.; it's 51% his. Not yet in sight over to the East, it's Grand Central City that concerns him; foundation work is progressing so fast that steel deliveries have already been advanced a month. To the West, it's a new cooperative apartment house that he's watching go up on San Francisco's Russian Hill.

· Latest Coups-Last week the man so comfortably seated behind the big table was viewing his world with particular pride and pleasure. He had, among other things:

• Won sponsorship of a \$100million redevelopment of New York's old 29-acre Washington Market area (which can be seen over Wolfson's shoulder as he stands on top of his building at 100 Church St. on cover photo). It became official with his designation by J. Clarence Davies, Jr., chairman of the city's Housing & Redevelopment Board.

· Assured the success of Grand Central City, planned to be the largest commercial office building in the world, by leasing 20 of its yet unbuilt 59 floors to a single company.

But it's always the next move beyond the next that excites men like Wolfson. And last week was also full of other agreements and promises, arrangements and understandings-some pointing to the erection of a new 40story building in lower New York, some connected with the proposed improvement of a three-block tract in Chicago, and some devoted to even more confidential and tentative propositions.

I. Rugged Entrepreneur

For Erwin Wolfson is an entrepreneur. He likes to use the French word himself. And it's easy to understand why he wants to escape the connotations of such terms as operator, promoter, speculator, and the sometimes even harsher epithets frequently thrown at men in the real estate field.

· Old Pro-This is Wolfson's business, without apology or excuse. He's one of the country's "pro's." His working day is full of deals, and this word he does not avoid. He meets men in secret, negotiates in confidence, manipulates huge sums of money, and operates always at the risk of his reputation for responsibility. The competition is ruggedly old-fashioned. Hard-bargaining may make it look cut-throat. The mar-ket's wide open. This is no place for the unenterprising or the faint of heart.

Wolfson's doctor says his heart is O. K. His hard-pressed employees testify to his "get-up and go." An old asso-ciate adds: "He can have his job; it'd give me ulcers." But Wolfson runs cool and collected. Only the eyes glow as he straightens up behind his working table to confide that the last phone call settled a deal that's been weeks in the making. "The lawyers will be here to-morrow." (They were, at 9:30 a. m. sharp.)

His voice may go up one decibel or so at such times, but he keeps the reso-

Operation World

nance out of it. Either the walls have ears, or Wolfson is simply too civilized to let out a war whoop when he achieves a coup that will make the papers.

· Daily Routine-This is the way it goes every day. Wolfson behind that table, one eye on a big brass desk clock in front of him, an appointment book to his left, the telephone in one hand, the other making quick notes, his right car cued to an almost hidden intercom. And most of the time a stream of "visitors"-corporate executives, brokers, lawyers, bankers, architects, engineers, consultants, tenants, and tenants-to-be, together with members of his own staff. The picture changes only when Wolfson hastens out to meet some of the same in their offices, or on such neutral ground as the Lotus Club or the Park Lane can provide.

For a man who looks at first glance like a small town merchant, Wolfson's business might seem too fast and fancy. In fiction, he would surely look more

flambovant.

In fact, Wolfson is a small businessman, though perhaps of a quality that received more generous recognition back in the Victorian Age. Today he arrives at the office all but unnoticed, has to repeat his name if he lunches at the Four Seasons.

• Solution Maker—At his office, behind his table, the man plays a role he knows well. Facts, ideas, bits of information flow in to him. Some are useful to the strategy, some are held in suspense. All eventually are pieced

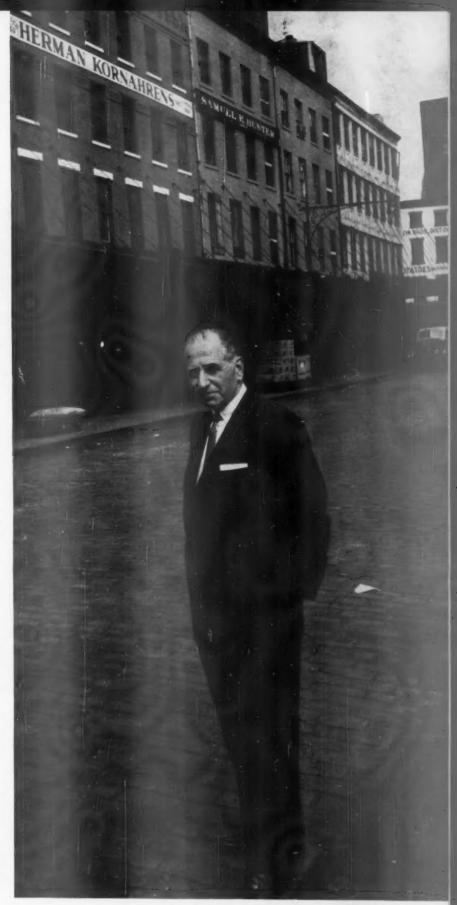
ogether

Decision may be delayed on one matter till agreement is reached on three others. But always it is a process of negotiation and diplomacy, a balancing of interests, a taking of all things into account. Wolfson knows that knowledge is power, that most problems interlock. He accepts the notion that creating solutions is essentially a one-man operation.

II. Career in the Making

Back in 1924, fresh out of the University of Cincinnati, Wolfson was pounding on doors looking for a job. An advertising agency took him in, together with his brand new B.A. in

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Aldrich engineers have worked out answers to hundreds of problems with abrasive, corrosive, viscous or highly compressible liquids. In fact, Aldrich can probably meet your need with a pump already developed from our experience in these specialized areas. If not, Aldrich engineers will tackle your requirements—and fill them.

Specifically, typical chemicals which Aldrich pumps are now handling include: anhydrous ammonia, brine, caustic catalysts, caustics in 50% solution, liquid CO₂, diethylene glycol, di-propargyl ether, hydrocarbons, methanol, amine, naphtha, nitric acid, silica gel, sulfuric acid, tanning solutions and carbamate.

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If your troubles come from pumps, let us help you. Aldrich Pump Company, 10 Pine Street, Allentown, Pennsylvania.

The tough pumping problems go to



... he was not an organization man—not unless the organization was his own ...

(STORY on page 110)

philosophy, but he soon left to join some friends who were happier, they thought, in real estate.

But beautiful Ohio couldn't compete with the lure of Florida's booming gold coast. All four boys shortly drove off to seek their fortunes. A few months suffering in a hot hotel room split four ways convinced Wolfson there ought to be more money in building new homes than in waiting for land prices to rise. Luck favored him with an honest and able contractor-partner. By 1926 he was an experienced builder.

• Early Failure—By 1926 he was also broke, caught by the bursting Florida boom. Not caring to return home a "failure" at 24, he found work with his Uncle Abe in New York. As it happened, Abe Adelson was a builder. In six years young Wolfson rose from the eighth level down to become an officer and director of the organization.

This confirmed Wolfson's "choice" of a career. It also apparently taught him he was not an organization mannot unless the organization was his own. So he set up Diesel Construction Co. as a partnership and, from the mid-30s onward, took care to safeguard his ownership interest in the complex of corporations, partnerships, and sole proprietorships that developed.

Though it is Wolfson himself who holds everything together—negotiating, buying, building, selling, and operating through several subsidiary organizations—he has now expanded himself into a staff of 30. And this is a 15-fold increase over the staff of two, which started out in a single office on lower Park Avenue.

III. Chief of Staff

Then and now, however, staff is the word—not organization. These are the personal assistants of Wolfson. There isn't a one who thinks for a moment that he works for some subordinate manager. The place is full of titles, but they are of two kinds: those that functionally name customary office jobs, and those that Wolfson distributes admittedly on an "honorary" basis.

For the executive-type titles worn by Wolfson's men don't come from out of this headquarters group. It simply hasn't been organized in any formal fashion. At best, the vice-presidents and other executive officers at large in Wolfson's office must be seen with titles borrowed from some of the cor-



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Right now, to name a few of their critical assignments, Aldrich pumps are handling:

Anhydrous ammonia in Taiwan, Japan and Korea.

LPG in Scotland, Venezuela and Italy.

Amine in Canada.

Oil in pipelines in Indonesia, Mexico, Colombia, Brazil and Bolivia.

Sulfuric acid in Cuba.

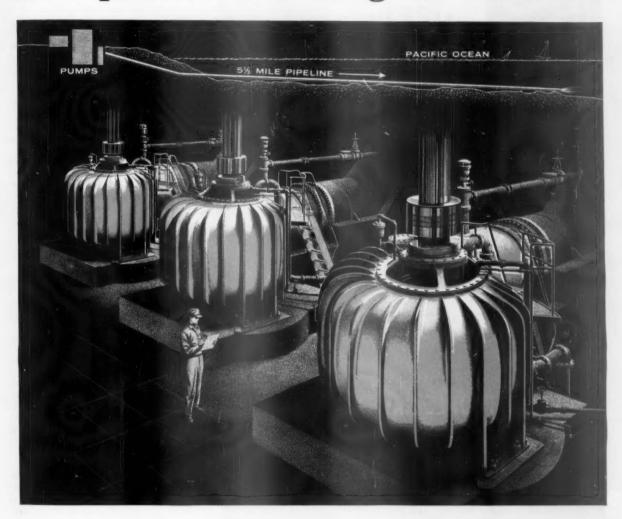
Waterflood projects in Egypt. Hydraulic fluids in Denmark, Chile, Turkey and India.

Obviously, Aldrich service is as dependable as our Aldrich pumps. We stock parts for every standard pump we build, and get them to customers fast, even to putting them on a jet with a service man. You will find a quick listing of our line in *Chemical Engineering Catalog*. For complete data, or help on a specific pumping problem, write us direct. Aldrich Pump Company, 10 Pine Street, Allentown, Penna.

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out to sea. Contact with sea water, plus normal dilution, completely neutralizes the waste and eliminates pollution. On this important project, Allis-Chalmers also teamed up butterfly valves, switchgear, and electrical control... provided the same caliber of coordinated equipment engineering that is available to all communities, large or small. Allis-Chalmers, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS



POWER FOR A GROWING WORLD



porations Wolfson controls. Nobody finds this particularly disturbing.

•. Untitled Boss—Nobody seems to be aware, either, that Wolfson himself gets along without any title at all. At "529" there's no board whose chairman he could be, though he's plainly that as well as president of some of the subsidiary parts of his little empire.

It may be that a little management goes a long way. Or perhaps there's a lot of management here, if it is leadership rather than organization that counts. Wolfson makes the plans, Wolfson makes the decisions, but his three closest- assistants are neither clerks nor order-takers. Rather, through them his eyes and ears and sometimes even his voice are extended. They, on the other hand, each possess special skills and background—in finance and in the law, for example—to supplement Wolfson's expertise in negotiation on the higher corporate levels.

• Adherents—William Zimmerman (executive assistant), Floyd McKee (treasurer), and Ray Colcord, Jr., (vice-president) came to Wolfson from RKO Pictures Corp., from Bankers Trust Co., and from Ebasco, respectively. Each exchanged the security and advantages of corporate business for the adventure of personal identification with Wolfson. They get much better than average salaries; they have an unguaranteed chance of perhaps tripling their incomes through participation in Wolfson's undertakings. But that doesn't fully explain their choice.

More important, they joined a business that—in its present form—will only last Wolfson's lifetime, if it is not dissolved earlier. Ambitious men may hope to have their own chance to run at least some part of it. Wolfson has never intended to build an institution; he is not founding a business dynasty. His family is provided for, his financial needs already well taken care of. "More money wouldn't change the way I live," he says

• Sub Managers—Already Wolfson can be seen withdrawing somewhat from the routine management of some of his affairs. Two of his corporations are now physically separated from his own office. Diesel Construction Co., Inc., of which he owns 51% and is chairman of the board, is several blocks away in its own large quarters, under the direct management of its president, Carl A. Morse. And Morse feels very much on his own, while at the same time acknowledging his close and long-time personal relationship with Wolfson.

Similarly, back at "529," but a significant six floors down from Wolfson, is the Wolfson Management Corp. in the hands of its vice-president, Theodore G. Kirschner. If he brings some questions up to his president on the 20th floor, they're only the questions



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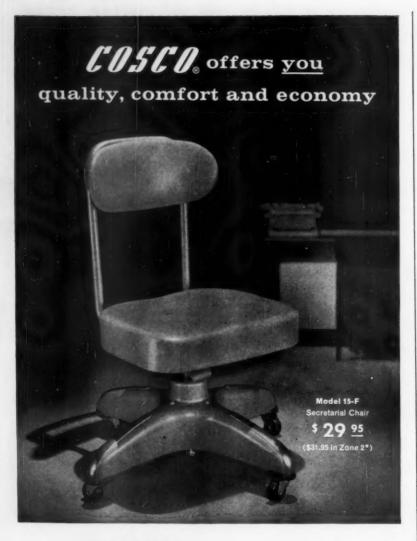
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General Chair

\$15.95 (\$17.95 in Zone 2*) ... in his organization, Wolfson has assumed the prerogative of a feudal lord ...

(STORY on page 110)

that Wolfson as 100% owner should consider, not the problems of operating management. Yet Kirschner and Morse are as much a part of the Wolfson business family as any member of his personal headquarters staff.

• Feudal Relationship—To all these members of Wolfson's establishment, his authority is more than the right of ownership. In his informal organization, Wolfson has assumed the prerogative of a feudal lord, leading his retainers by dint of a display of personal power—even physical vitality—coupled with judgment and understanding, which is completely persuasive so long as it results in one success after another. Under this setup, he can bestow prizes in titles, bonuses, and other awards on his underlings for superior performance and outstanding loyalty.

Such personal relationships, so characteristic of small business in general and single-managerships in particular, together with the corresponding lack of formal organization, produce other interesting phenomena. One of Wolfson's men openly regards him as "the fountainhead of everything," and swears the fountain will never run dry. But a staff assistant used to the orderliness of bigger business admits that "the shock was considerable" when he joined Wolfson. Still another dares hope that someday there will be "more systemization, delegation of more authority, and more specific areas of individual operation." And this suggests there may be some truth in an employee's complaint that "some things get done twice over, while other matters don't get attended to at all."

· Self Reliance-With a growing staff, there well may be increasing difficulty as Wolfson continues to exercise his personal leadership over all. In handling the personnel problem at the moment, he still depends largely upon the perceptions and skills that are his own special tools in promoting the business outside, in dealing both with clients and competitors-the skills of a negotiator, balancing interests, sizing up individuals, seizing opportunity, giving firm decisions. To do this with patience and poise, always ready to listen and to compromise where adjustment may be advantageous, requires complete self-confidence, and self-con-

Wolfson must deal with men very like himself-financiers, presidents of major companies, bankers, institutional

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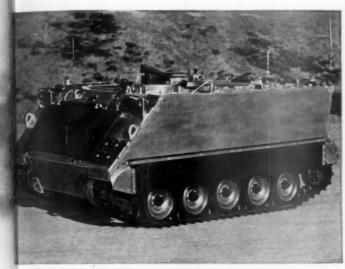


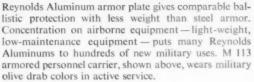
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Example: More products by far are packaged in Reynolds Aluminum foil than in any other aluminum foil, for both sales appeal and protection. An example of leadership in packaging research and development.

Example: More new aluminum applications for homes, farms, commercial and industrial buildings have been developed by Reynolds than by any other company. An example of leadership in building and architectural products.

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REPUBLIC AT AVIATION

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leaders, and so on-men who want what he has to sell. This may be no more than a few thousand square feet of floor space, or it may be a feasible plan for the rebuilding of 30 acres, but no deal is simple and some are frighten-

ingly complex.

Then it's Wolfson's forte to perform his special service with practised skill. He's the one to put all the balls up in the air, and keep them there, until he can bring them down, all at once and in the pattern precisely required to make the best economic sense. The typical result has been to win signed contracts and higher status in the business world.

• Typical Operation—The job may take many months. Up until the last moment, for example, Wolfson's proposals for a new building at 30 West Broadway remained as secret as the hopes of Columbia University that its ancient property there (the site of old Kings College) might be improved. Yet plans had to be drawn and potential tenants secured. With the building only a dream, business tenants had to be evaluated as acceptable neighbors, as "names" that would produce prestige, and, of course, as residents who would pay the rent on time and regularly renew their leases.

For many months nothing existed in writing to make Wolfson the holder of anything but the trust and confidence of a large number of interested parties. Then, all on one day, he (1) closed with the then Guaranty Trust Co. on a crucial lease, (2) closed with Columbia University on the lease of the land, (3) secured a construction loan, and (4) completed his arrangements

for permanent financing.

Wolfson's flair for this kind of operation proves little about him as a manager. When he sits down with a future client at the Lotus Club, he is not an executive but a salesman. And it may be that the qualities required, including both charm and affability, are not identical with those needed by the executive chief of a growing organization. Yet they very definitely are the qualities that are employed by the successful leader.

• Perceptive and Receptive—At "529" as leader of his own staff, Wolfson displays two differing sets of traits. On the one hand, he is the calm and judicious man his clients know so well. He has learned how to listen. His quick perception encourages the flow of ideas. He seems the most receptive man imaginable. Conferences that include him are free and open.

But the same man can run a very tight ship when he believes he has found an error, faulty assumption, or just plain carelessness. His voice, normally quieter than most, becomes brusque, his attitude demanding. In



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. . . Wolfson is no intellectual. His library at home is outweighed by the TV set . . .

(STORY on page 110)

most areas a clear and objective analyst, he expects as much from others.

Pushing himself to above-average performance, he has little patience with less in others. Bring in a smudged drawing, but don't expect Wolfson to miss or excuse it. Make an argument using last month's figures, but don't hope that Wolfson will be tolerant of the discrepancies. Leave an appointment standing in his deskbook for the wrong day, and you will hear about it. Be slow in following a request, and it will sound more like an order. Torment his intelligence with a pointless story, and you may feel the fool who's not suffered gladly.

IV. Complex Man

Wolfson has a way of leaving some people breathless. And that's remarkable in a quiet and thoughtful man, now a full 58 years old and, he fears, beginning to show it. He is a complex man and something of a paradox.

He says he loves the life he leads, and he's obviously entirely at peace with himself-a man without fears or regrets. Yet his interests and activities are so diverse that most men would find difficulty in harboring them all. • Trustee-For example, Wolfson serves as trustee on the boards of the New School for Social Research, Horace Mann School (both in New York), and Technion University (in Israel). He is a director of the Educational Laboratory of the Ford Foundation. A liberal arts graduate himself, he has endowed a chair in philosophy at Brandeis University and given substantially but anonymously to another university. A young man from the Near East now studies engineering in the U.S. thanks to Wolfson's interest. And Wolfson himself is proud of his record for attendance at evening courses at the New School.

Yet Wolfson is no intellectual. His library at home is outweighed by the TV set, and he rarely reads for pleasure, much less studies a book. He even refuses to consider himself really a student at the New School. He listens and observes, there as everywhere; scholarship he knows to be another

thing.

Among his stronger passions is a distaste for psychiatrists. He also likes to show a distrust of esthetes, at least pretending not to understand them. Yet he is a serious supporter and vice\$1,000 to \$5,000

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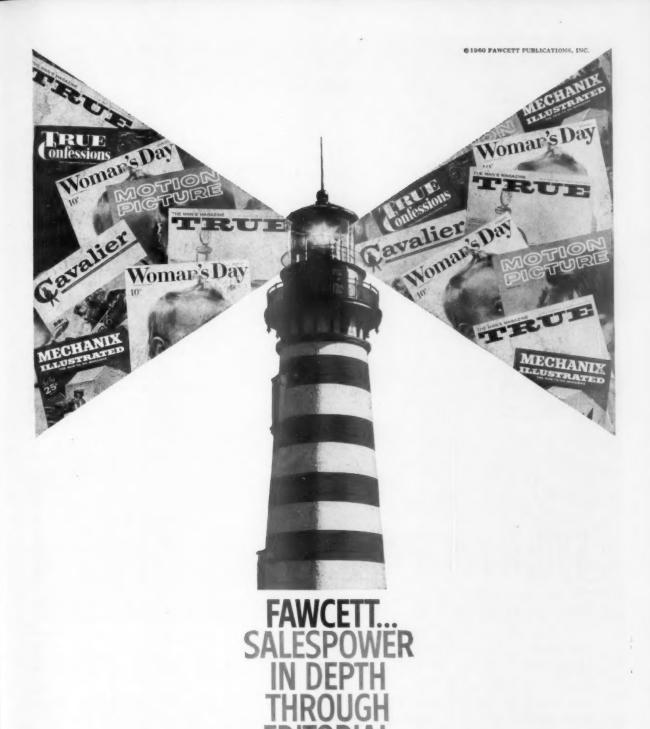
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president of the Academy of Religion and Mental Health. His friends include many artists; their works decorate the walls of his offices and the lobbies of his buildings. And he, himself, is a patron member of the National Sculpture Society, the recipient last year of its Gold Medal

• Self-Trained Specialist-His success as a businessman has been notable, he is daily in contact with other executives, he can properly claim several titles in the managerial hierarchy. He's been a supervisor of men on the job and faced the problems of working himself up through an organization. Professionally, he has specialized in real estate and building all of his life.

Yet Wolfson has never studied real estate practice, nor has he ever been exposed to formal training in management or courses in salesmanship, much less to graduate work in any university school of business. History and English, philosophy and international relations have been his only studies.

• Sportsman-A sensitive man, living by his wits and valuing in his associates the same objectivity and considered judgment he shows himself, he is also an active sportsman-not for show nor as a summer pastime, but regularly and rigorously as a major aspect of his life. A competition swimmer in college, he can still take a swan dive from the 10-ft. board.

All year round he delights in getting out on horseback over the more rugged trails of upper Westchester County. Even as a novice businessman in New York, he chose the life of a Larchmont commuter in order to be closer to weekends of riding. And at 54, finding himself with a new tennis court on his estate with no one making use of it, he bought a racquet, hired professional instruction, and took up tennis. His game at 58 is hard and fast.

As a multi-millionaire today, Wolfson has his estate in Purchase, N. Y. and his town home in the Ritz Towers. He takes his vacations in Italy, lets the gardener tend his private strawberry patch, and enjoys running around in a sporty Alfa Romeo. But when he leaves 529 Fifth Ave. along with the other working men that building contains, Wolfson is the one who looks least the smart New Yorker.

• Restless Mind-The old black Caddie that may pick him up is not the one now in the ads. And his conversation will not be about the profitable deals of the day. Instead, he will sound like a Democrat deeply concerned about a world disastrously divided between Russians and Republicans. Or, he'll look up at all the new buildings-so many of them sisters in shape-and wonder how the town will look in another 10

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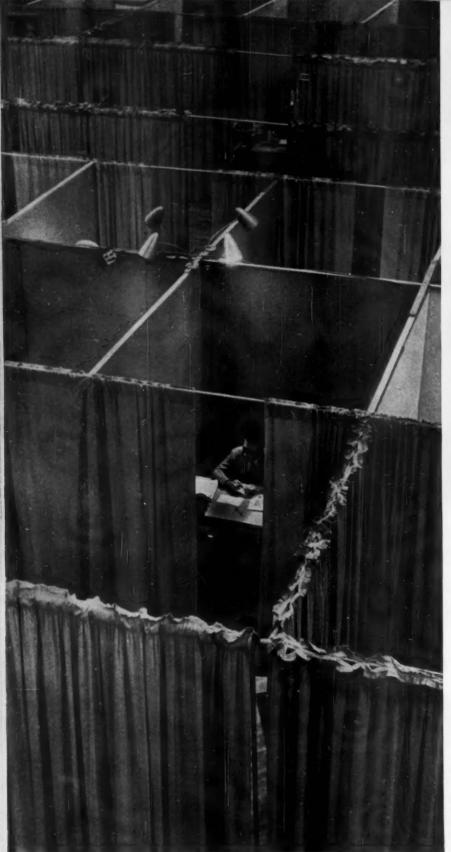
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CAREER Center set up by William Douglass (above) near Western Electronics Show & Convention draws about 1,500 job hunters for interviews with two dozen companies.

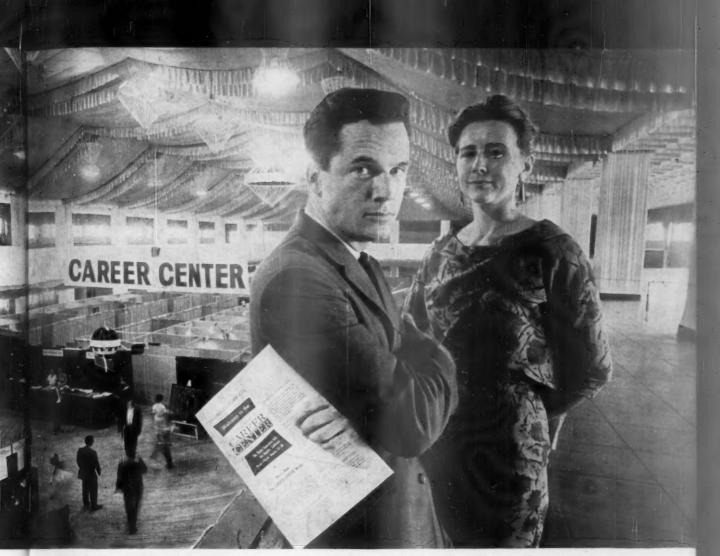


Job Piracy N

Job changing is a big problem everywhere, but it's most acute among engineer-hungry companies, especially those in the defense industry. These companies tend to stockpile technical talent in anticipation of contracts, and to freeze job designations and salary levels. So the only way an individual can break out of the web is to go to another company. A popular technique is to circulate at scientific trade shows, where recruiters from many companies are on the lookout for likely prospects.

William Douglass, a young New Yorker whose specialty is matching up technical employers and job hunters, is putting this "talent piracy" on a systematic basis. His method climinates much of the high-powered proselyting that goes on at the shows, and also protects the scientist who doesn't want the boss to know he is unhappy in his present job.

 Anonymous Applicants—Last month, Douglass opened his California Southland Career Center a few blocks from



CUBICLES are used by participating companies to interview applicants. Registrants at Career Center are kept anonymous.

Moves Into Open at Trade Shows

the headquarters of the four-day Western Electronics Show & Convention, attended by about 35,000. The center drew 5,000 visitors, of whom about 1,500 registered for job interviews.

Twenty-four technical companies and laboratories from all over the U.S.—ranging from Curtiss-Wright Corp. to Sanders Associates of Nashua, N. H.—had staffs on hand 12 hours a day to talk to anyone who might fit into their organizations.

11

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The men remained anonymous during their interviews with their prospective employers. As each arrived at the center, he was given a registration form and a booklet introducing him to Douglass' other recruiting tools. Literature from the participating companies, as well as films showing what some of the companies do, were available nearby.

The engineer filled out the form and handed it to a clerk, who assigned him a number that would be his only identity until he chose to reveal his name. Douglass' staff then typed up each

man's qualifications and background, and photo-reproduced it for distribution to each of the companies present. Company recruiters sent back the numbers they were interested in. Also, a registrant could request appointments with specific companies. But a company did not have to talk to anyone in whom it was not interested; and an engineer could turn down a company without having his name revealed, in case he changed his mind later.

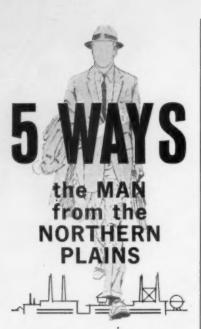
• Approval—Even before the results had been tabulated, participating companies were voicing their enthusiasm. "Every year the button-holing and back hallway tactics have gotten progressively worse at these shows," says Wayne Osborne, chief recruiter for Cal Tech-NASA's Jet Propulsion Laboratory in Pasadena. And L. R. Nuss, manager of professional employment for Collins Radio Co.'s Cedar Rapids plant, adds: "This is an effective way to screen applicants, with the mechanisms Douglass has set up. The biggest cost before a

show is newspaper ads, and we had to do none of this before this show."

A recruiter for Minneapolis-Honey-well Regulator Co. says his company conducted more than 100 interviews, hired several men, and arranged to fly a dozen more back to New Jersey to look over the company's facilities there. Figuring the cost of being in the center, plus ad costs, salaries and expenses of recruiters, Honeywell has already more than made up the tab, since it estimates the cost of hiring a medium-experience man at around \$1,000.

Another company eliminated \$4,000 worth of newspaper recruitment ads, figuring to make it up by word-of-mouth publicity at the career center.

• Salary Brackets—Douglass feels that career centers such as his are most valuable for the engineer or scientists with four to seven years' experience and in the \$8,000 to \$12,000 salary range. But Jet Propulsion Laboratory hopes to find some people priced as high as \$18,000, and Douglass says that at the Institute



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of Radio Engineers show in New York last March, the center processed a couple of \$30,000-a-year men.

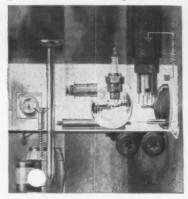
· Plus Services-The Douglass career aid services don't stop with the end of each trade show. Douglass is president of a company that he and two fellow Yale undergraduates founded in 1949, and that operates under the names of Careers, Inc., and Career Publications. With a staff of 14 located in New York, Washington (D. C.), Los Angeles, and Chicago, the company publishes an annual hard-bound directory of job opportunities for graduating college students, and a quarterly paperback directory of opportunities for experienced scientists and engineers. Similar directories are published for retiring servicemen seeking a place in industry. Technical companies are represented in these directories in much the same way as advertisers in a magazine. Douglass charges an annual fee for listing in his directories.

Between trade shows, the companies continue to fill their needs with Douglass according to a numbered code of job categories. In addition, the anonymous registration forms that applicants fill out at career centers are reproduced in quantity and sent to all of Douglass' advertisers following each show, so that without paying a cent the applicant is exposed to dozens of companies. If he wants Douglass to circulate a full-scale resume of his talents and experience, he can buy this service for \$9.75. On the other end, Douglass charges his companies \$1 for a telegraphic contact with each of the engineers they have heard about through his National Manpower Register. There is no "employment agency" fee involved if the two get together. Douglass says he processes 500 engineers and scientists a month through his New York headquarters.

• New Ventures—To finance the individual career centers that he hopes to set up as the idea catches on, Douglass charges a flat fee of \$1,275 to participating companies, less \$300 if the company is an advertiser in his directories. In return, the company gets all the registration forms that were filled out at the center, can distribute its brochures and show movies, and gets interview space at the center.

Douglass' first center near the Institute of Radio Engineers' show in New York last March logged a total of 3,100 registrations. As an outgrowth of his Los Angeles venture, Douglass plans to set up a permanent career center in Los Angeles. He has signed a lease for a three-room suite and hired a local personnel relations man to manage the

Participating companies would pay \$1,500 each (\$1,000 if they are advertisers in Douglass' publications) for a minimum three-month period; \$5,000 give the little ones a big send-off...



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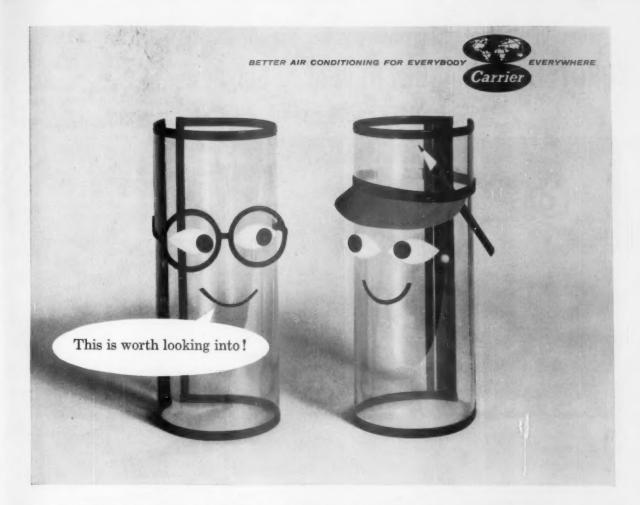
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The company had its first experience with factory air conditioning in 1958 when production facilities were moved from Long Island into a new Carrier air conditioned plant in Brownsville, Tenn. Management knew that a mere 1.5% increase in worker efficiency would cover the owning and operating costs of the system. Actual gains, however, show that the benefits of air conditioning have more than quadrupled this break-even figure.

"Summer output jumped so substantially that our annual productivity is up 6.5%," the company reports. "Absenteeism decreased 17% and labor turnover is down 23% from previous levels. We have our pick of local employees—important even in an excess labor market. And frequent machine adjustment is no longer necessary to compensate for the softening of acetate in hot weather."

As a result, Kleer-Vu is earning a 32% annual return on its Carrier air conditioning investment—or enough to pay for the system in 38 months.

Many other manufacturers report that Carrier air conditioning is producing similar figures which, significantly, do not vary greatly as the result of the geographical location of plants or the type of products manufactured. The most important factor that determines the profit potential of air conditioning is the concentration of workers in a plant or plant area.

Where the number of square feet per worker is low, the return on an air conditioning investment will invariably be high. For this reason, the most densely populated departments should be air conditioned first in any program that calls for the installation of complete plant air conditioning over a period of several years.

There are other yardsticks, too—all of them described in the booklet, "Will factory air conditioning pay off for me?" Write for it today without obligation. You will find it helpful. Carrier Air Conditioning Company, Syracuse, N. Y. In Canada: Carrier Air Conditioning Ltd., Toronto.

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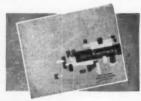


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(or \$3,000) for a year. They would have the same sort of facilities they had at WESCON, plus extra services at extra charge.

If Douglass can get five or six companies to start with, he thinks he can make the idea go. Right now he feels reasonably sure of five although none has actually signed up.

• Educational Problem-Douglass realizes that he is still held suspect by

some people in the technical industries he deals with. "Our first problem is educational; our second is the Gentlemen's Agreement," he says. The Gentlemen's Agreement is the so-called pact entered into by technical companies several years ago to combat the piracy of talent at trade shows. The agreement was violated right and left-and still is. Several of the large aircraft, electronics, and defense industries had "hospitality" suites going full blast during WESCON week, as they have had at such shows for years.

"Our problem is to convince companies to work in a cooperative environ-ment," says Douglass. "All of these companies have done this sort of thing for themselves, and they work cooperatively through college placement cen-ters, so why not here?" He adds that a recruiter on his own can contact only 30 to 50 prospects over a weekend at a trade show, whereas he is able to select from hundreds a day at the career

• Local Opposition-WESCON would not officially sanction Douglass' activi-ties, and did not have to since he was not operating on their territory. Nor would WESCON permit him to use its name to advertise his center. But apparently the trade show people welcomed whatever Douglass could accomplish toward cleaning up the piracy problem that in the past has threatened to discourage support of shows.

Douglass' only real opposition in Los Angeles came from local newspapers that worry about losing recruitment ads, and from local employment agencies, which accused him of poaching on their preserves. Douglass' lawyers pointed out that Douglass does not take a cut on the salary of any man he places, nor is the fee he charges companies conditional on any men they actually hire.

• Dual Purpose-The participating companies themselves-in addition to being exposed to a greater selection of talent and being able substantially to reduce their cost of hiring-hope to benefit from a reverse effect. "Some of our own men will undoubtedly come in here for a look around-after all, there isn't anyone who isn't looking for a better situation if it can be found," says a recruiter from one lab. "We can always hope what they see will convince them they already have a good job." END

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I read it
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In Management

Survey Shows a Close Correlation Between Company Sales and Chief's Pay

Company growth nearly always means higher pay for the president—whether or not it benefits the stockholders.

From a survey of chief executives' compensation in 605 companies between 1953 and 1959, McKinsey & Co. consultant Arch Patton found that their raises averaged only 6% in companies whose sales volume had not increased. But, Patton reports in the Harvard Business Review, most of the companies studied did boost their sales (by an average of 43% in the six years). And the average presidential raise over the period was 16%.

Furthermore, says Patton, top management pay and profits show a closer correlation than they used to—possibly because of more use of profit-related bonus plans. But sales volume, rather than profits, still seems to have most impact on chief executives' compensation.

Even in the growing companies, the average presidential pay raise lagged behind the average production worker's on a percentage basis. Partly that was because of turnover. Nearly half the companies got new chief executives during the period, and generally the new man started at a lower pay rate than his predecessor. Those presidents who held their jobs throughout the six years ended up with just about the same percentage pay increase (about 24%) as the production workers got.

The biggest annual gain in pay for presidents came last year, when their average compensation went up &% over 1958. That closely matched their companies' sales gain, an average of 9% over 1958. Automotive and electronics executives got the heftiest raises; these industries also showed big increases in sales and profits. Aircraft and missile companies, on the other hand, reported lower sales and profits—and cut their presidents' pay.

The maverick industry was electrical equipment, which reduced chief executives' compensation despite higher sales and profits. One factor, says Patton, was turnover in top management.

"Assistant to" Is Boss' Right Hand, But It's an Unpopular Job Category

Many businessmen and management consultants object to the use of staff assistants or "assistants to," chiefly on the ground that they foul up the chain of command. Even so, the job continues to thrive in government and the Armed Forces, as well as in business.

That suggests the assistant must be of some use to his boss, Prof. Thomas L. Whisler of the University of Chicago Graduate School of Business concludes in the September issue of Administrative quarterly. His article is based on a study of the job in business, the military, and federal and city government.

Usually, says Whisler, the assistant plays the role of information intermediary between his boss and the

latter's subordinates or the public. The only exception is city management, a highly professional field, where the chief purpose often is to train the assistant for taking over the top job later.

The job of assistant is most likely to appear, Whisler reports, when the top executive is new, particularly if he's an outsider, and when the top executive runs a large hierarchy with diverse operations and a lot of public contact. Unless the assistant to is clearly a traince, his boss' other subordinates are likely to dislike him; his tenure depends on how well he gets along with his boss.

Few Executives Read for Pleasure; It Gives Them a Guilt Complex

Executives don't often read for pleasure, and when they do they are apt to feel a little guilty. That's the conclusion of Peter E. Siegle, consultant psychologist to American Photocopy Equipment Co., after interviewing 250 executives about their reading habits. Siegle found that businessmen read a lot of business material, newspapers, and magazines, but average only four books a year. Usually they read for information, for help with a hobby, or for self-improvement.

Senior executives do more pleasure reading than junior ones (and less reading for self-improvement), but even the older men argue that they aren't really reading for fun but to relax so they can work harder the next day. The books that executives read tend to be those recommended by their bosses, wives, and friends, or something they picked up at random.

Management Briefs

The hotel-operating Tisch brothers, who won control of Loew's Theatres, Inc., last year, took over its management last week. Laurence A. Tisch was named chairman and chief executive officer. The former chairman, Leopold Friedman, 71, remains a director. The former chief executive, Eugene Picker, continues to be president. Preston A. Tisch succeeds his brother as chairman of the executive committee and becomes president of Loew's Hotels, Inc., a new subsidiary that is taking the movie-house chain into the hotel business (BW-Jun.25'60,p32).

A new philanthropic foundation to conduct and sponsor research in management, the American Foundation for Management Research, Inc., has been formed by the American Management Assn. AFMR will accept grants for research from businesses, other organizations, and individuals; AMA itself does not accept gifts. AMA will supply the initial financing; the foundation will take over a number of the association's current research projects.

Charles P. McCormick, chairman of the board, McCormick & Co., Inc., will be given the Henry Laurence Gantt Medal for "distinguished achievement in management as a service to the community" later this month. The food company head gained fame in the 1930s for his system of "multiple management," including the use of so-called junior boards for developing younger executives.



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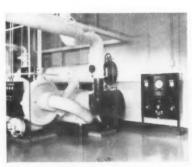


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You can meet these changing needs with a new type of central air conditioning system from Trane: it's called Wall-Line Air Conditioning. This system is more economical because fewer units are used to cool the area. Instead of individual air conditioning units in each room, one unit is installed in a twenty-foot bay, for example; this unit has lateral extensions that reach into the adjoining offices or areas. Conditioned air, under pressure, from the unit, is distributed through the extensions. And by linking additional units with extensions in adjoining bays or offices, a continuous blanket of

comfort is provided around the entire perimeter of the building. Insulates occupants from summer heat, winter cold. And when changing occupancy needs come up, you may put in new partitions, divide office space as you wish—without affecting the air conditioning system in any way! No matter how the area is divided, there is conditioned air in every space. Result: economy for owners... comfort for occupants.

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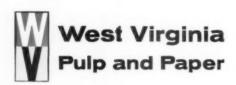
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INTERNATIONAL OUTLOOK

BUSINESS WEEK SEPT. 10, 1960

There's no doubt that Nikita Khrushchev expects his dramatic appearance at the U.N. General Assembly meeting this month to strengthen his bargaining position with the U.S. and the West.



He'll probably come up with flashy new disarmament proposals. And he may announce a huge new aid program for Africa. These would add glitter to Khrushchev's assumed role as champion of peace.

More important, Khrushchev's proposals-by raising world hopes for disarmament and a faster pace of economic development-might put the West under more pressure to give ground on Berlin and arms control.

Khrushchev has another aim at the U.N. He wants to show Red China -and the world-that he is master of the Soviet bloc and sets its foreign

To do this, he has lined up a chorus of European satellite leaders for his U. N. performance. They will back up the Soviet leader when he plugs hard for "peaceful coexistence." The idea is to show that Khrushchev and the European Communist block are not influenced by Mao Tse-tung's thinly disguised view that war is inevitable and even desirable.

No one knows, of course, how Khrushchev will play the U-2 and RB-47 issues. If he plays them down, Secy. of State Herter-and Pres. Eisenhower, if he appears at the U. N .- will react coolly, trying to avoid a clash with Khrushchev. If the Soviet premier plays them up, there could be some real fireworks—into which the two Presidential candidates almost inevitably would be drawn.

It is Washington's view that Khrushchev will use as much tact as possible, if he touches on the Congolese and Cuban situations, to avoid crossing swords with the U. N. and the Organization of American States. In fact, the Soviets will be attempting to woo the underdeveloped countries that so ardently support those organizations.

At midweek, Khrushchev's plans for returning to Moscow were still not official. After several days in New York, he would like to visit Cuba. But he may fly straight to Africa, without a stop in Havana, to avoid alarming other Latin countries, which are increasingly sensitive about Soviet influence in this hemisphere. In Africa, Khrushchev wants to stop in Guinea, Ghana, and Ethiopia.

The Organization of American States meeting on Latin American economic development got off to a good start this week in Bogota, Colombia.

Under Secy. of State Douglas Dillon outlined U.S. plans for a \$500-million revolving fund to assist in Latin American "social development" housing, education, land reform. Dillon promised that this was but the first step, that further assistance is planned for the future.

Dillon quickly allayed several Latin American misgivings. He pointed out that the new funds are in addition to, not in place of, the \$300-million to \$600-million going to Latin America each year for industrial projects. He further hinted that more such funds would be forthcoming but did not say when, how much, or in what form.

The U.S. proposals emphasize private investment and enterprise, both domestic and foreign. Dillon also stressed Latin American self-help-public 137

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK SEPT. 10, 1960 and private investment, tax reform, improved fiscal policies, diversification of production.

The Latin American delegates still have some reservations, although they are generally pleased with the U.S. approach. Some don't like what Venezuelan Pres. Betancourt calls the U.S. "deification of private enterprise." Then, too, there's a split over how to go about administering the program. The U.S., Venezuela, and Uruguay want existing institutions to take it on. Argentina prefers a new organization.

Dillon did not mention two subjects Latin Americans consider vital. At midweek, the Venezuelan delegate demanded that the U.S. help to stabilize export commodity prices, which markedly influence most Latin American economies. Other delegates will most likely ask that the U.S. reduce import curbs on Latin American products.

U. S. officials expect that most of these points will be smoothed over, and the general U.S. approach accepted.

U. N. forces are cracking down hard in the Congo this week. They were given the green light by Pres. Joseph Kasavubu, who, after weeks of staying in the background, came forth to challenge Soviet-leaning Premier Patrice Lumumba.

Exercising his authority as chief of state, Kasavubu dismissed Lumumba and called on the U.N. to take over the maintenance of law and order. Kasavubu moved after civil war had plunged the Congo even deeper into chaos. Lumumba fought back by ordering the dismissal of Kasavubu.

In the confusion, U. N. troops moved in fast, establishing what amounts to martial law in key parts of the troubled country. Airfields were closed to halt ferrying of Lumumba's troops in Soviet planes. And the Leopoldville radio was shut down to keep Lumumba off the air.

At midweek, the situation was far from settled. Both Congolese leaders were seeking parliamentary approval. A victory by Kasavubu, who appears to hold the stronger hand, would clear the way for a political settlement in the Congo.

Kasavubu favors a federal solution to the complex regional and intertribal problems that bedevil the country. He almost certainly could come to terms with Moise Tshombe, leader of secessionist Katanga Province, and other dissident leaders. Lumumba wants to run a strong central government.

The Cubans have done much talking recently about getting the U.S. out of its Guantanamo Bay naval base. But Prime Minister Castro has taken no formal action yet, nor has there been any direct threat.

Few Pentagon officials expect a military attack. They believe that Cuba might demand renegotiation of U.S. base rights there. As a prelude, look for Cubans to accuse the U.S. of harboring anti-Castro elements, of training anti-revolutionary forces for subversive activity, and of exploiting Cuban workers.

If Castro demands renegotiation, U. S. officials will sit down with him. Most likely, the U. S. will offer to increase its rental payments, which are now only \$3,386.25 annually. Beyond this, there's no sign of any U. S. policy on how to counter a Cuban demand to get out of the base.

Contents congrighted under the general congright on the Sept. 10, 1960, Issue-Business Week, 330 W. 42nd St., New York, N. Y.



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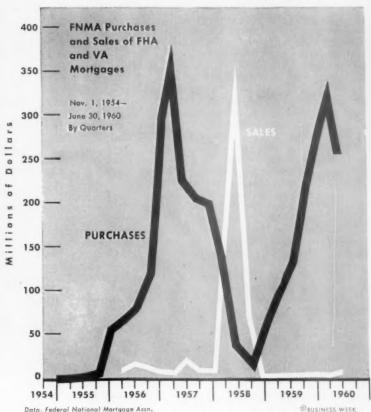
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THE MARKETS

FNMA Plays Backstop In Home Mortgage Game



@BUSINESS WEEK

In presiding over the transactions charted at left, J. Stanley Baughman helps give breadth and liquidity to the home mortgage market-by buying when it's tight, selling when it turns soft.

This week, the nation's biggest mort-gage banker has a "for sale" sign on his \$6.1-billion in home mortgages. Over the next six months or so, he will be lucky if he sells \$500-million worth. Such a sales total will constitute a job well done by J. Stanley Baughman (picture), president of Federal National Mortgage Assn.-Fanny Mae. And the homebuilding industry will be the better off for the achievement.

Fanny Mae's chief function since its establishment by Congress in 1938 has been to add breadth and liquidity to the mortgage market. In tight money times, when interest is high and mortgages are hard to place it is Fanny Mae's job to go into the market and buy them. Since the beginning of 1959, for example, Fanny Mae has been a heavy buyer.

By the same token, when mortgages are scarce and investors plentiful-as in 1958 or in the market that seems to be shaping up now-it is Fanny Mae's business to sell mortgages (chart, above). This is what Baughman is doing today. Though he still is buying mortgages in bulk, he feels the mortgage market is turning soft. So he is ready to sell mortgages to investors looking for an outlet for their funds. In the second quarter of 1960, for instance, Fanny Mae's mortgage purchases came to 27% less than in the first quarter. At the same time, it sold \$4.6-million

in mortgages, compared with no sales at all in the first quarter.

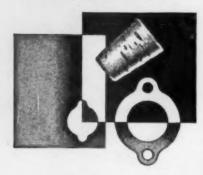
· Bigger Brothers-In the broad picture, Fanny Mae is but a small part of the government's housing program. It is overshadowed in size and influence by its parent, the Housing & Home Finance Agency, which coordinates federal housing policy. And it is less well known to the public than the Federal Housing Administration, which insures home mortgages. Fanny Mae is essentially a banker's bank-one that deals with mortgage companies, banks, savings and loan associations, homebuilders, and insurance companies, rather than with the public directly.

Nonetheless, in its quiet way, Fanny Mae fills a crucial role for prospective homeowners. This was proved most recently last year when the agency moved in to alleviate the squeeze that tight money was putting on available mortgage money. Fanny Mae picked up more than \$1-billion in home mortgages in that period.

Homebuilders and lenders who wanted to sell mortgages knew they could turn to the agency to shed their holdings. Then the proceeds could be lent again. This made available a sufficient supply of money to keep homebuilding operating at a high level. Without Fanny Mae's assistance, interest rates might have gone so high that prospective homebuyers would have been scared off.

• Three Programs-Fanny Mae-which buys and sells only FHA and Veterans

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Administration mortgages—now operates three principal programs:

Secondary market operations. To support the mortgage market, Fanny Mae buys and sells FHA and VA mortgages, much like any other lender. The agency now holds 246,000 such mortgages, valued at \$2.7-billion. Prior to 1954, funds for these mortgage purchases were supplied directly by Congress. Now this part of the program is financed chiefly through the public sale of debentures and, since last April, short-term paper (Fanny Mae now has outstanding more than \$2.1-billion in debentures).

The agency requires everyone who sells it a mortgage to put 2% of the loan proceeds into FNMA stock. This gives the agency some additional equity, but it is also intended some day to lead to the creation of a privately owned corporation to handle Fanny Mae's secondary market operations.

Special assistance. Fanny Mae gets money from the Treasury to finance projects in which private lenders are reluctant to invest heavily, such as housing for the elderly, housing for Guam, Alaska, and Hawaii, special support for low- and moderate-priced housing, and the big \$600-million urban renewal programs. In all, the special assistance portfolio holds 106,000 mortgages totaling \$1.7-billion.

Management and liquidating. This program chiefly covers the handling and liquidating of a grab-bag of old FHA and VA mortgages taken over from the Reconstruction Finance Corp.

• Tenth Anniversary—This week, Fanny Mac is observing the 10th anniversary of its separation from the Reconstruction Finance Agency. In the past decade, it has proven to be an anomaly among government operations.

Alone among federal agencies, Fanny Mae has private stockholders—some 6,200 of them, who hold more than 500,000 shares of common stock with a book value of \$60-million. All the voting preferred stock, however, is held by the Treasury.

Fanny Mae also has the rare distinction in government of paving its own way. In 1958, for example, it earned \$10.3-million after taxes; last year, hurt by higher interest costs on the money it borrowed, it netted \$9.1-million. (A possible exception is the Federal Reserve, whose stock is owned by member banks; but the Fed is considered in a different class.)

• Turning Point—This profitable corporate setup can be traced to Fanny Mae's reorganization under the Housing Act of 1954—the turning point in its life. The whole structure of the agency was changed to conform more to the pattern of private industry. The reorganization's chief aim was the eventual conversion of Fanny Mae into

a privately owned corporation. Fanny Mae started as a government agency in 1938, as a mortgage buyer of last resort during the Depression. The agency had little impact in those early years or during World War II, when private homebuilding practically shut down.

As the housing boom took hold, Fanny Mae became a major force. But by 1954 it had attracted millions of dollars in questionable mortgages and a reputation that proved embarrassing at times. At that point, Congress stepped in to redirect Fanny Mae.

• Selling Stocks—To set the stage, Fanny Mae was given the authority to sell its own security issues to raise money for mortgage purchases. The theory was that eventually all Fanny Mae's operations would be financed this way and that, in time, the agency would retire the Treasury's preferred stock and turn Fanny Mae's secondary market operations over to its common stockholders.

But there seems little chance of a complete transition of this sort anytime soon, if ever. Any Administration would think twice before it turned the agency loose, because of its vital role in federal housing policy. And no Secretary of the Treasury would be happy to see Fanny Mae competing with Treasury issues for funds without some controls.

• Nonpartisan Boss—If Fanny Mae is an anomaly in Washington, so is Baughman. He has lasted through two different Administrations—no mean feat in an area as critical and high-pressured as housing. There has been some industry quibbling about the tight way he runs things, but this has been generally muted in the chorus of praise.

The 62-year-old Baughman is unassuming in appearance, but he is a tough administrator with 40 years in real estate. Baughman ran his own real estate firm for 13 years in Pittsburgh before stepping into a government career with Home Owners Loan Corp., the agency set up during the Depression to avert home foreclosures. He became national manager of the corporation in 1948.

In the past 10 years, Baughman—by steering a non-controversial course—has been one of the few top housing men in government to escape the ax.

• Critics Squawk—However, not all of Baughman's decisions at Fanny Mae have received unreserved approval.

The most popular complaint is that Fanny Mae sets too tough a standard for mortgages it buys; about 5% of the mortgages offered are turned down. Critics argue that Fanny Mae should buy any mortgage that is FHA-insured or VA-guaranteed. Baughman maintains that it is good practice to buy only those that would be attractive enough for resale.

Industry Spoken Here



North Carolina's 18-man Commerce and Industry team of location engineers, headed by Wm. R. Henderson (Center), has a specialist for just about any "language" industry may speak—or any question you may ask. This team includes chemical, civil and mechanical engineers, research analysts, small-industry specialists, and other experts qualified to provide basic information on plant sites.

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NORTH CAROLINA



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August 31, 1960.

Wall St. Talks . . .

. . . about Cubic Corp. offering, new issues market, Transitron, Income Fund of Boston, Greek bonds.

A 50,000-share secondary offering of Cubic Corp. (whose shares are now trading on the American Stock Exchange at \$60) is finally close to public sale. The deal has been delayed because of a disagreement between company executives Walter J. Zable and Robert V. Werner and the underwriter, Hayden, Stone & Co., over how to price the stock. A compromise finally was reached, and reportedly the secondary will be priced at 57 if the market price is 64 when the offering is made. For every point over 64, the offering price will rise ½ point; similarly, the offering price will drop ½ point for every point under 64.

Brokers are muttering about a twist in the new issues market, which they say is depriving their customers of shares in "hot" issues. They say that some underwriters are willing to part with stock, say, 100 shares, only if the broker agrees to buy another 100 shares of the new issue when it starts trading.

Top brass from the syndicate department at Merrill Lynch, Pierce, Fenner & Smith are "working on a deal" with Transitron Electronic Corp. (now trading at \$45 on the NYSE). The deal reportedly will be a public offering of another 1-million shares of Transitron by David and Leo Bakalar, the brothers who control the company. Last December, a 1-million share offering at \$36 a share—underwritten by Merrill Lynch—took Wall Street by storm. The stock jumped to \$51 within minutes.

Income Fund of Boston, which claims to be the only mutual fund that borrows funds overseas, is searching just as hard for places to put its money. It has made new investments in Bank of America 6½% letters of credit, notes of the Award of Mixed Claims Commission—U.S. and Germany, a direct obligation of West Germany that pays 9½% interest, and C.A. Colgate-Palmolive 6½% international notes, 1962.

Defaulted Greek bonds got a flurry in the over-the-counter market when word leaked out that an envoy was negotiating the debt with the U.S. Foreign Bondholders Protective Council. But an insider as the talks fell apart "just when they were getting productive."

Why Solar designs industrial gas turbines to weigh between 1 and 1½ lb/hp

by Paul A. Pitt

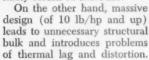
Chief Engineer Solar Aircraft Company

The weight of Solar gas turbines is the result of a design philosophy that is unique in the small gas turbine field.

Most gas turbine designs fall into one of two extreme categories. Aircraft-type engines, at one extreme, embody highly sophisticated techniques for extreme light weight in relation to horsepower, but have resulting short life. The opposite philosophy employs the ultra-massiveness of steam turbines to assure long life.

There are important disadvantages in both approaches when long life, reasonable cost, dependable operation, simple maintenance and easy transportation and installation

are required. While aircraftdesign engines (of ¼ to ½ hp/ lb) can be modified and derated for longer service life, the resulting product is inherently delicate. This compromise inevitably results in short life.



Since World War II, Solar has designed and built a variety of gas turbine units with char-

acteristics that lead to both long life and low weight. The Saturn gas turbine engine, for example, is an 1100 hp unit intended specifically for industrial and military installations. It has a weight-to-power ratio of 1.1 to 1.4 lb/hp.

Paul A. Pitt

Although it is designed for long life, it utilizes only enough materials in its components to satisfy structural and thermal requirements. This approach resulted in a design that makes no compromises with durability and performance, yet meets the needs of industry for flexibility in a small package. It has an 1100 hp rating at a specific fuel consumption of 0.61 lb/hp-hr and a continuous rating of 1020 hp at 0.63 lb/hp-hr SFC.

Meeting these objectives required an engine with a simple thermodynamic cycle and high efficiency components. An axial compressor was designed with an operating efficiency of 86%, and this was combined with a multi-stage, axial type turbine of advanced aerodynamic design. Over-all dimensions of the engine are shown in the figure below.

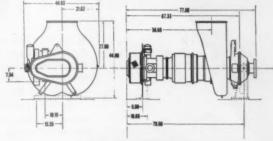
To fulfill workhorse service requirements, the engine was

designed to operate at a conservative gas temperature of 1450 F continuous rating. The stress levels are also low, so that major rotating and stationary components will have more than 100,000 hours of life with long periods between overhaul. To keep costs down and assure dependability, the engine design is simple and straightforward.

In brief, the development program of the Saturn turbine adhered to three principles: Careful aerodynamic design for high performance; use of moderate temperatures and low stress levels for long life; and exhaustive component testing for ruggedness and reliability.

Presently scheduled field applications of the Saturn turbine include: Power source for 750 kw electric generator sets in process plants, portable field equipment, pipeline pumping, and gas compression in the petro-chemical industry. Other uses are as a power source for a 600 kw generator set in a commercial marine installation, propulsion units for marine and amphibious vehicles, and prime movers for off-highway vehicles.

Detailed data on Solar gas turbines and other turbomachinery is available. Write Dept. H-157, Solar Aircraft Company, San Diego 12, California.



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In the Markets

Stocks Continue to Sell Off, Even Last Week's Two Hottest Numbers

The stock market continued its late summer sell-off this week. The popular Dow-Jones industrial average sagged to 612 at midweek, down some 30 points from its high of two weeks ago. And brokers figure that stock prices will soon make the fourth test of their 1960 low of 600 on the Dow-Jones.

The most noticeable feature of the market's current decline is the lack of buying enthusiasm on the part of institutions. This lack of buying support means every bit of bearish news serves to drive down stock prices.

On the speculative fringe of the market, a reaction set in to last week's spree of TELautograph Corp. and Comptometer Corp., the long-distance electronic writing twins (BW—Sep.3'60,p87). TELautograph traded at 144, down 10; Comptometer at 20, also down 10. Partly responsible for the deflation was the admission by TELautograph insiders that they had been selling their company's stock, shortly after company president Raymond E. Lee had denied that such selling had taken place. Moreover, Comptometer, put out an official statement that "it is not anticipated" that its new machine, the Electrowriter, "will make any contribution to the corporation's profits in the near future," and passed its dividend,

The bond market was on tenterhooks this week waiting for the Treasury to make up its mind on a massive advance refunding of its wartime 2½% bonds. There are over \$25-billion of these issues outstanding at present and there are indications that the Treasury soon will try to roll over most of them in a single shot. It's felt the Treasury is simply waiting for the "right market conditions" to make the decision public. The bond market's tone has not been too strong, and this is why the Treasury is stalling. Of course, if the market should sag further, the whole thing could be called off.

New Fund Will Buy Municipal Bonds

A novel investment fund, evolving memories of the "fixed trusts" that boomed during the 1920s, was unveiled this week by (Ira Haupt & Co.) a New York Stock Exchange firm. It's called the Municipal Investment Trust Fund, Series A, and will invest exclusively in nunicipal bonds; interest income paid to holders of the fund's securities will be tax-exempt. Haupt tried to start a similar venture in 1957, but that time the issue bogged down in red tape at the Securities & Exchange Commission.

The Haupt fund is slated to go into operation in several weeks. Before the fund is actually sold to the public, Haupt's underwriting syndicate will buy a municipal portfolio worth about \$20-million; investors will have a chance to look over the list of investments before they decide to buy the fund.

The fund aims to provide (1) diversification of investment risk, which should appeal to high-tax-bracket investors, who have relatively small amounts of money to invest; and (2) professional management, at a cost well under that normally charged by professional investment counselors.

Under the ruling from the Internal Revenue Service that gives it tax exemption, the fund will not be allowed to reinvest its funds. When bonds are sold or mature, the money will have to be paid out to the fund's investors. This means that as its investments mature the fund will liquidate. Haupt plans to follow Series A with other more specialized funds.

Japan May Ease Stock Restrictions

Japan is expected to announce two steps to ease restrictions on U.S. investments in Japanese stocks. Rumors are mounting that before or during the International Monetary Fund meeting in Washington Sept. 26, Japan will:

 Approve listing of American Depositary Receipts for Japanese stocks. ADRs are certificates registered and traded in the U.S. that are backed by deposit of the original shares in a custodian bank abroad.

 Provide for the establishment of a securities yen, similar to British securities sterling, which is not freely convertible but which can be reinvested or sold to other nonresidents for investment purposes.

At present, interest in Japanese investments is dampened by time limits imposed on repatriation of foreign capital: a minimum of four years and one day before withdrawal of the full amount, a two-year wait to bring out even one-third.

Inauguration of ADR listings would mean U.S. investors could trade certificates in this country without being cramped by the waiting period.

The Markets Briefs

San Diego's Charles Salik is setting up another company to specialize in electronics investments. His Electronics International Capital, Ltd., of Bermuda plans to issue 2.5-million shares at \$10 a share—proceeds to the company will be \$22.5-million. As a Bermuda-chartered investment company, it will pay no Bermuda taxes; it also feels it has no tax liability in the U.S. Salik's management concern now runs the \$37-million Electronics Investment Corp., a mutual fund, and Electronics Capital Corp., a small business investment company.

The Murchison oil family's dispute with Allan P. Kirby, head of Alleghany Corp., is getting hotter (BW—Sep.3'60,p93). Clint W., Jr., and John Murchison have made no secret of their displeasure over the way Kirby is handling Investors Diversified Services, a Minneapolis-based investment company. And they have bought additional stock in Alleghany to exert quiet pressure on Kirby. But IDS now seeks to oust the two Murchisons from its board, and the move may trigger an open proxy fight between the Murchinsons and Kirby.



AIRLINE PILOT'S work begins an hour before take-off, as he studies weather maps.



THE PILOT, Capt Jack Purchla of United Air Lines, then files his flight plan with a dispatcher, Walter Leland, detailing route, altitude, load, and fuel consumption rate.



EXTRA CHECK of the plane, the DC-8 jet "Captain George Douglas," is made by Purchla. Others have the responsibility, but pilots like to see for themselves.

Airline Pilots Clash With U.S.

The Air Line Pilots Assn. (ALPA), begun in secrecy 30 years ago by six Army-trained barnstorming fliers, is today the aristocracy of the American labor movement.

Its pay scale soars high above those of other unions. The average captain earns \$16,000 a year, and those at the top close to \$30,000; co-pilots average \$8,500 and a maximum of \$18,000.

Not only in earnings but in other respects as well, airline pilots enjoy a status closer to that of professionals than that of trade unionists. Their president, Clarence N. Sayen, often likens the union to the American Medical Assn.

There is a similarity in the rigor of training and high standards of perform-

ance required of members of both, and in the fact that pilots, like doctors, are entrusted with the lives of those they serve.

 Still a Union—But, for all its resemblance to a professional society, ALPA still is basically a union, utilizing the conventional tactics of organized labor. And it's a powerful one.

Though small—it has an active membership of 13,500—it is well-heeled and has under its wings an estimated 99% of those who fly scheduled airliners.

Operating in a fast-growing, highly competitive industry where a work stoppage can mean a major competitive setback, ALPA has scored success after success. With a mere strike threat it can inflict a damaging economic wound, be-

cause many customers flee the reservation counters of threatened airlines. And when it does resort to an actual walkout, the blow is particularly severe air passengers and freight cannot be stockpiled before or during a strike for sale afterwards.

I. Challenging Uncle Sam

ALPA, however, currently finds itself on the losing end of a battle that it fears may undermine some of its power. Oddly enough, the protagonist is not the airline industry but the Federal Aviation Agency, which is headed by a tough administrator, former Lt. Gen. Elwood R. (Pete) Quesada.

· Safety Rules-The issue is a series of



COCKPIT is office for Purchla, First Officer Walter Ramseur, and flight engineer.

Regulation

new safety edicts handed down by Quesada. As far as he is concerned, safety is the only question involved. But ALPA not only considers a series of FAA orders unwarranted from a safety standpoint but also feels that Quesada is interfering in matters that should be thrashed out at the bargaining table, thereby handing ammunition to the airlines. One of his regulations, for instance, carries the clear implication that the union is guilty of featherbedding. The feud has produced an exchange

The feud has produced an exchange of heated statements between Sayen and Quesada, with Sayen accusing the FAA chief of being unrealistic and dictatorial, and Quesada charging the union with trying to disparage and intimidate his agency. But so far, despite union in-



GROUND MAN trots out of way after waving jet toward taxi strip, and United Flight 857 is off from New York to Chicago, nonstop, with crew of six and 109 passengers.

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vective, court challenges, and an 11-day wildcat walkout of 1,300 Eastern Air Lines pilots in protests over one of the agency's orders, Quesada has not had to back down.

Congress created FAA as an independent and strong regulatory agency in 1958 to replace the old Civil Aeronautics Administration that operated with limited powers under the Dept. of Commerce.

II. Basis of Feud

Congress, with ALPA's blessing, acted quickly to put the new agency into operation after a series of in-flight plane collisions had dramatized the dangerous overcrowding of the nation's airways and its antiquated air traffic control Quesada, a much-decorated World War II air commander and subsequently aviation adviser to Pres. Eisenhower, was selected to run FAA. He was given broad powers, never before held by one man, to regulate use of air space and to bring aviation safety practices up to the requirements of the let Age.

· Bad Crash Record-Although FAA worked vigorously, pouring millions into modernization of airways and making a good start toward automating the in-tricate task of ground control, the first year of its operation still proved to be the worst in aviation history from a standpoint of lives lost. In 1959, nine major crashes occurred, killing 294 passengers and crew members.

Quesada, in analyzing these and more than 100 other air mishaps, concluded that about 75% of them resulted from human negligence, 50% from error or failure on the part of flight crews, and 25% from faulty aircraft maintenance work by ground personnel. It was against this background that he began his aggressive campaign to reduce human error as a factor in air crashes.

 Law to Himself—Under the authority granted him by Congress Quesada may make any rule he wishes respecting air safety. He is obligated to provide notice and to give affected parties an opportunity to submit written comment, except where he takes emergency action such as grounding a faulty type of aircraft. He is not required to hold hearings unless he wants to.

Appeals from his decisions-they may be made to the five-man Civil Aeronautics Board-are limited. The board may review the fairness of the enforcement of the FAA chief's orders, but it does not have authority to take decisive action to correct those that might be unsound. ""ats whose licenses have nodified may ask for

ere is no appeal for , use as short-term sus-

The administrator's rulings may be

challenged in the court, but judges thus far have recognized him as an expert granted broad powers by Congress and have refused to overturn his orders.

III. Four Disputed Orders

Quesada has taken four major actions that have stirred the wrath of ALPA.

· Stay in Cockpit-He served notice that he intended to interpret strictly a long-ignored rule that pilots must remain at the controls of an airliner in flight and not make visits to the passengers' cabin except for urgent reasons. He cited two instances of near-accidents during pilot absence from the cockpit.

Sayen brands this as a petty harassment of pilots, insisting that it is proper for pilots, exercising good judgment, to leave the cockpit for such purposes as relaxing momentarily, promoting good will among passengers, and checking on safety procedures.

· Retire at 60-Effective last Mar. 15, Quesada barred pilots 60 years of age and older from flying commercial airliners. He held that the incidence of heart attacks and strokes becomes sig-nificantly greater as a man reaches 60, yet such attacks cannot be predicted by prior medical examination. For the safety of the 56-million passengers who use commercial airliners, he said, it was wise to remove pilots from airliner coa-

ALPA's retort: This arbitrary age limit fails to take into account individual differences in physical fitness and ability. There is no real evidence that age alone is responsible for diminution of a pilot's efficiency and no record of a crash having been brought on by the physical breakdown of a pilot. Fixing a retirement age by government regulation is an invasion of labor-management

trols at age 60.

prerogatives, ALPA says. The pilots have made a legal challenge to this order, losing the initial round. The case is likely to reach the U. S. Supreme Court. Appeal to CAB was not possible even though the regulation, in effect, modifies pilots' certificates. Quesada aimed his regulation at the air carriers, prohibiting them from utilizing the services of a pilot over 60, yet leaving the pilots' licenses unaffected and allowing them to fly non-scheduled and private planes. ALPA terms this a "cunning device."

· Medical Past-FAA and ALPA also were at odds over a move by the agency to insure that it had full access to information on a pilot's medical history, but this dispute was settled amicably. The union did not object so much to FAA's aim as to the method it intended

FAA first planned to require pilots applying for its medical certificates to sign an authorization for any doctor or any other person having knowledge



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after the installation of Muzak."
says George B. Long, president
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Because timing of music was so important to the monks of Chartres Cathedral, one of them invented the hourglass so their special music would always be heard at specific times. Today, timed, minute-by-minute programming of music is even more important for the motivation of office and factory workers.

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about the applicant's medical history to supply information to the agency.

FAA's move was prompted by the fact that, while pilots have a professional obligation to disclose past ailments or treatments, they were under no enforceable compulsion to do so. Thus, FAA did not know until after two recent major crashes that one pilot had been seeing a psychiatrist and possibly taking tranquilizers and that another had earlier suffered a mild heart attack.

The union objected to the sweeping authority that FAA planned to demand of all pilots, to investigate their private relationships with doctors. In a compromise move, FAA dropped the disputed requirement from its medical forms but amended civil air regulations to give it limited authority to check up on pilots' medical histories. It will make such checks but only in certain

• The Third Seat-Then, on June 8, Quesada ordered that federal inspectors making in-flight crew checks on jet airliners should be given the seat directly behind the captain. This is the seat normally occupied by the third pilot of the four airlines that have contracts with ALPA calling for a four-man crew. (The fourth crew member is a flight engineer.)

It was this order that touched off a wildcat strike by Eastern pilots and the token refusal to fly by some of Pan American World Airways' pilots. Eastern suffered a \$7.5-million revenue loss before the pilots' rebellion ended; 100,-000 passengers were inconvenienced.

ALPA maintains that shifting the third pilot from his accustomed seat and forcing him to move to the rear of the flight deck disrupts crew coordination and jeopardizes safety. The third pilot does not handle plane controls but does some communications and cockpit paperwork. But, says the union, he would be in a position to take over quickly in case of the incapacitation of either the pilot or the co-pilot.

Quesada's position is that jet airliners were certificated to operate safely with two pilots and a flight engineer. He argues that since government regulations do not require a third pilot anyway, it doesn't really matter where he sits. There is an implication that the ALPA has engaged in featherbedding where it has made contractual arrangements for the third pilot.

Actually, all jet airliners carry three pilots, even when they don't have a four-man crew. That's because lines using only a three-man crew require the flight engineer to be pilot-traineda requirement that was the basis of a bitter jurisdictional dispute between ALPA and its brother AFL-CIO union, the Flight Engineers International.

This dispute has broken out again

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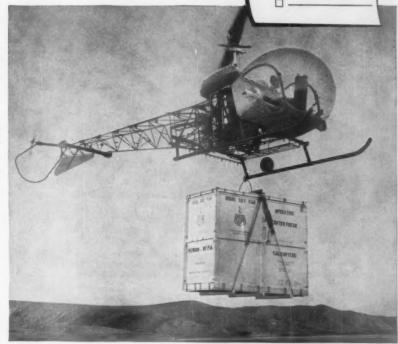
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Plywood Sky Vans are the key to a revolutionary new service offered by Calicopters, a California helicopter line offering fast, field-to-market air shipments of prime, highly perishable fruits and vegetables.

Developed by Shield Fabricators, Inc., of Gardena, specialists in design and construction of freight and cargo vans, the new Insul Sky Vans are made of lightweight fir plywood, lined with two inches of foam insulation. Properly sealed, the containers stabilize temperature of pre-cooled contents within 3 degrees for 48 hours.

The standard Sky Van is 84x42x72 inches and carries over a ton of produce in its 113-cubic-foot interior. Assembled with metal Klimp fasteners, the boxes can be knocked down and returned flat at minimum cost for re-use.

Plywood construction holds down weight and fabricating costs, and also provides tremendous resistance to racking stresses and impact.





Stronger than steel, lighter and lower in cost, these giant fir plywood box girders were used on the new International Paper Co. converting plant in Auburndale, Fla. Four feet deep and 48 feet long, the girders have one-inch plywood webs with 2x12 lumber flanges and stiffeners. Available in most parts of the country through component fabricators (write for names), plywood beams can be engineered for any load or span and fabricated in almost any shape. Other advantages include ease of handling and smooth, paintable surfaces.



Computer floor system installed at a leading West Coast university employs vinyl-covered 1½ thick plywood over steel supports to provide the strength and stiffness needed to withstand tremendous loads of giant data processing machines. Raised plywood floors for computers permit free cable runs and space for air conditioning. Sections can be removed for servicing or circuit changes.

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ATLANTA . BALTIMORE . CINCAGO . KANSAS CITY . LOUISVILLE . NEW YORK Maker of RUGGED MULTIWALL PACKAGING for Industry in the current strike by the Flight Engineers against Continental Airlines. The Flight Engineers recently asked AFL-CIO to oust the ALPA, charging that it is conspiring against it with the company-still flying its planes despite the walkout. The Flight Engineers told AFL-CIO that Continental gave in to "extreme economic pressure" from the ALPA and agreed to recognize the pilots' union as bargaining agent for flight engineers on jets.

· More Fighting Ahead-Although ALPA has lost out so far in its fight with Quesada, the battle is far from over. The union plans an attempt to persuade Congress in 1961 to trim his rule-making authority, to require public hearings by FAA, and to empower CAB to modify or revoke his orders on appeal. Sen. Clair Engle (D-Calif.), a private pilot himself, has introduced two amendments to the Federal Aviation Act for this purpose.

IV. The Pilots' Side

ALPA's fight with the Federal Aviation Agency has tended to overshadow its disputes with the airlines industry. But negotiations are now under way on 11 of its contracts, and the union currently is on strike against Southern Airways, a feeder line.

ALPA struck against Southern June 5 to enforce its demands for more pay and changes in work rules. Southern kept flying with nonunion pilots. The pay and rules disputes have been settled, but the strike is continuing over Southern's determination to retain its nonstriking pilots and its insistence that ALPA forfeit their seniority when they return to the planes.

The pilots' union has threatened to retaliate by shutting down air service to most of the Southeast by having its members on 13 other airlines refuse to cross picket lines at the 47 terminals served by Southern Airways.

· Mutual Security-ALPA joined with six other transport unions in July to work out a new mutual assistance agreement, providing that in case of a strike by any one of the unions, the others would render all possible moral and financial support.

Six carriers-Eastern, American, Trans World, United, Capital, and Pan American-have meanwhile asked the CAB to extend for one year approval of their plan for mutual strike assistance and to make it more comprehensive. If the pact is strengthened, National, Braniff, and Continental plan to join it.

· More Pay-The union's primary aim in negotiating new contracts is to obtain higher pay and a reduction in flying time to compensate for the increased money-earning ability of jets, which carry nearly twice as many passengers as the latest piston-engine



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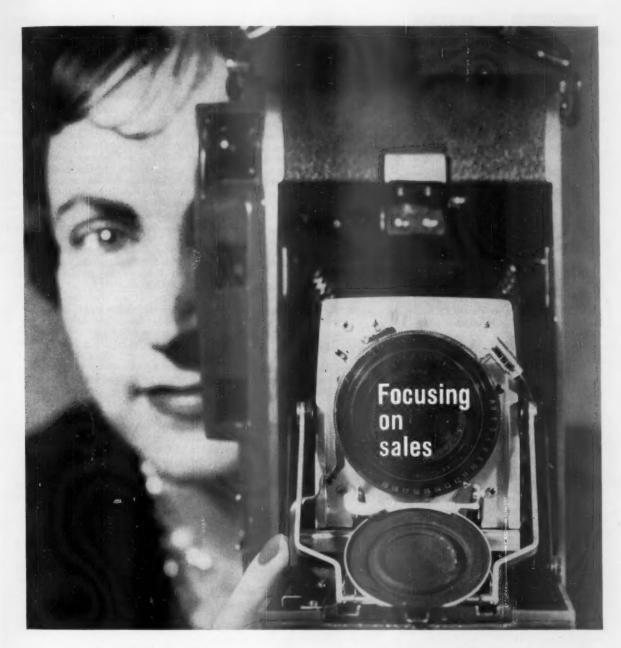
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CLARENCE SAYEN, president of Air Line Pilots Assn., fights hard to maintain pilots' professional standing.

planes and make 33% more flights in a given time.

A Boeing 707 jetliner carrying a capacity load of 106 passengers from New York to Los Angeles would provide the carrier about \$16,300 in revenue, compared with about \$9,150 provided by a 69-seat, propeller-driven DC-7. And the jet could make more such flights per week.

The pilots argue that they are entitled to more pay because the stress in handling jets in a traffic control system designed for piston-engine planes will shorten their careers.

• Limited Hours—The union says that pilots are often pictured as \$20,000-a-year men but that only about 5% of its members draw that much pay. It also battles a widespread impression that pilots enjoy the shortest working hours in the labor movement.

Federal law provides that airline pilots shall not be required to fly more than 85 hours a month. This limit was established in the historic Decision 83 handed down in 1934 by a fact-finding commission established under the old Wagner Act.

This decision, rendered in the face of a threatened strike against the then-infant aviation industry, established the basic working conditions for pilots and provided the underpinning to make ALPA a strong union. In addition to limiting flying time to 85 hours a month, Decision 83 also established a salary formula providing that, in addition to base pay, pilots and co-pilots should also receive hourly and mileage pay. Today there is extra compensation that is based on the speed and weight of planes flown, a day-night differen-

tial, overseas flying, and other factors.

• Justification—In justifying their high earnings, pilots make these points:

 Although they fly a maximum of only 85 hours a month, they spend between 170 and 200 hours on duty, making out flight plans and doing other paperwork, refueling, and waiting for trips to leave on turnarounds.

• The skill and responsibility involved in handling modern airliners are staggering. In piston-engine DC-7s, the pilot and his assistant must keep tabs at various times on more than 400 knobs, warning lights, switches, and other controls. The new jets have less gadgetry, but their speed and other factors put more of a strain on the pilot.

• Pilots must undergo frequent and rigorous examinations that, if failed, can result in grounding. These include two comprehensive physical examinations a year, two flight proficiency checks, and a line check, a scheduled flight under the critical eye of a chief pilot.

V. The Airlines' Side

As in every labor situation, there are two sides, and the airlines have their problems, too. Where, they ask, is the money coming from to finance everhigher salaries for airline employees?

The industry is having its difficulties riding out financial turbulence brought on by adjustments to the Jet Age. A plan announced July 28 would merge Capital and United Air Lines (BW—Aug.6'60,p24) and, like Capital, other weak lines are considering mergers with stronger lines.

 One-Sided Balance—In negotiating with ALPA, the industry complains that there is what Pres. Stuart C. Tipton of the Air Transport Assn. calls an "imbalance" at the bargaining table. He cites these points:

 The pilots and other unions are not restricted on wage demands they can make. Yet the airlines cannot increase fares or, in some cases, even expand their operations to meet payroll increases without governmental approval.

 ALPA, which is entitled to use the machinery of the Railway Labor Act, utilizes each step in the process to sown advantage, resorting to strike threats along the way to make the carrier suffer without an actual strike.

 Decision 83, rendered 26 years ago, "perpetuates pay factors and working-time limitations based on a period when relatively primitive flying conditions prevailed and pilots were deemed to have but a short productive life in the air."

• The union has successfully resisted industrywide bargaining and uses a "whipsawing" technique that plays

off one airline against another and one concession against another.

VI. Union Leaders

Saven (picture), who calls the signals in ALPA, has headed the union since 1951. He is a former co-pilot for Braniff and can rightfully claim to be an economist and a geographer as well. He was graduated with honors in both subjects from Northern State College of Michigan and pursued them further in graduate work at Michigan Institute of Technology, the University of Minnesota, and Southern Methodist University.

Sayen was elevated to the union presidency after the pilots rebelled against the leadership of his predecessor, the fiery David L. Behncke, one of ALPA's founders and its leader for 20 years. Behncke, one of the early mail plane pilots, ran ALPA as a one-man operation. It was often said he carried union headquarters in his hip pocket.

• Founder Grounded—Behncke's gruffness, vehemence, and unvielding demands gave ALPA much of its strength in its first two decades. But the pilots tired of his iron grip and his tactics.

When he resisted demands by a fiveman investigating committee for reforms and reorganization, the pilots, though they still regarded him with high affection, ousted him from the presidency and voted him a lifetime pension of \$15,000 a year.

• New Type—The union turned to Sayen, who was then only 32 and a man of sharp contrast to Behncke. Sayen is erudite, polished, diplomatic, skilled in the psychology of negotiation. He quickly came to be regarded by the industry as a competent adversary who is basically reasonable but who drives a hard bargain.

"He is typical of the 'new' labor leader—young, sharp, confident of his power, and from our viewpoint somewhat arrogant," says an industry spokesman. "He relies heavily on research to back up his case and does his homework well."

• Union Well Off—The dues of ALPA members range from \$60 to \$525 a year. But the union has a program that is rare in trade unionism. When the treasury reaches a certain level, rebates are made. ALPA reported its net worth to the Labor Dept. earlier this year as \$3.191.000.

ALPA conducts its own investigations of airline crashes. It is quick to take exception if government investigators hold that a crash is due to pilot error when the union has determined otherwise.

The union will hold its eighth annual air safety forum in Chicago next week. It expects 300 pilots, air line officials, and government and airport safety specialists to attend. END

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New Push-Button Heating Pads by General Electric have five parts made of Geon shown in inset: (1) inner cover; (2) cordset; (3) T-Connector; (4) tube which contains thermostat; and (5) heater wire insulation. B.F.Goodrich Chemical Company supplies the Geon vinyl.

How heating pads get "most wanted" features from different Geon vinyls

Waterproof. The manufacturer of these heating pads says they "make wet pack applications a cinch." The reason? Their inner cover is made of film extruded of Geon vinyl. It is tough, abrasion-resistant and waterproof.

Convenient. Three thermostatically-controlled heats are at fingertip in a push-button switch with a cordset which is accurately molded of another form of Geon vinyl. The thermostat connections are enclosed in tubing made of a similar impact-resistant,

rigid-type Geon. These vinyls are white—could be any color.

Safe. All the wiring inside the heating pad is insulated with still another Geon vinyl. Geon provides excellent dielectric properties and good resistance to abrasion, weathering and heat, as well as being unaffected by corrosion.

Here is an excellent example of the way one manufacturer uses different Geon resins and compounds to improve a product. For more information, write Dept. GA-7, B.F.Goodrich Chemical Company, 3135 Euclid Avenue, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.



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PERSONAL BUSINESS

BUSINESS WEEK SEPT. 10, 1960



One way or another, foreign travel and foreign influences are changing the style of men's suits this fall.

For the executive-on-the-go, there's the International Look. It's a hybrid design that will make you feel at home almost anywhere—London, Bonn, New York. Main features of its silhouette: a natural shoulder line, looser across the chest, wider lapels, two-button, shorter jacket with well-tapered sleeves, well-defined waistline, trousers slimmer and single-pleated.

Trend toward the well-tailored British look suits is continuing. Shoulders have soft lines but lack the natural cut of American suits. Jackets, a bit longer than Continental coats, pull in slightly at the waist and boast a deep center vent. Trousers follow a tapered, slim shape.

Even well-known American styles—Natural, Ivy, Ambassador, Continental, and Trans-American—are taking on the International Look. Most will feature roomier jackets, slimmer trousers, and broader lapels.

The fashion for conservative Oxford grays and herringbones is slowly fading away. Coming to the fore in their place: moderately brighter shades of the conventional blues, grays, and browns, more checks, miniature glen plaids, stripes. The British are accenting chalk and cluster stripes, fancier weaves. Fashion "leaders" among your friends will be appearing more often in olive—now the big color.

Vests are staging a minor comeback. They're being worn mostly with sporty outfits to add an extra touch. Occasionally, they're turning up in some country suits with a British look, also will go with several of the coming International models.

You'll have to pay more for top quality suits this fall—as much as 7% over last year's prices. Suits will weigh less (9 to 10 oz. per yd. against the former 11 to 12 oz.), feature lighter blends of Dacron and wool, and keep creases better. Main emphasis: suits that will be comfortable nine months of the year.

On the horizon, clothiers see much gayer sport coats, more patterned materials, and revival of the double-breasted suit for larger men.

You won't find bargains in luxury-style rented apartments or cooperatives if you're hunting for space in big cities this fall. Rentals of higher-priced apartments and sales of costly co-ops are booming in most areas, according to a Business Week check.

You'll have to hunt hard for what you want. Don't expect rental agents to offer special deals—they're sitting back, watching customers flock in.

Here's a quick, city-by-city look around the nation:

- New York. Expensive apartments are renting fast. For example, a newly opened, posh apartment house with seven-room suites leasing for \$11,000 and \$12,000 a year already is 70% occupied. No decline in market is in sight as older people continue to move back to the city. Note: There have been some concessions, notably where a lease is effective Oct. 1 and occupants move in rent-free several weeks in advance.
- Philadelphia. A real boom exists in luxury apartments, with plenty of waiting lists and inquiries. Apartment construction is being rushed as the flowback to the city continues hand-in-hand with civic improvements.

PERSONAL BUSINESS (Continued)

BUSINESS WEEK SEPT. 10, 1960 Atlanta. Demand for luxury apartments is not so heavy as a year ago, but few landlords will grant concessions to would-be tenants. Rates have gone up, now range between \$250 to \$900 a month.

- Cleveland. Market is tight, and rents are climbing—in an area commanding among the highest rents in the country. Rental of apartments in older buildings has dropped off somewhat. Note: On longer leases, landlords may do more decorating for you.
- Chicago. Market is far from soft; some lessees pay three-quarters of the decorating costs in order to move in. Extensive alterations of older buildings have increased their popularity. Tip: You may be able to dicker over the rent in some cases. Apartments quoted at \$350 a month have been let for \$275. Sales of co-ops are going quite well, especially older, larger units.
- San Francisco. Demand for larger, expensive apartments continues (eight to 10 rooms, \$350 to \$400 monthly). New buildings are filling up steadily; however, you may get concessions—lowered rents or added improvements. Luxury co-ops are the big thing. One building set for completion next spring already has sold over half its units (\$50,000 to \$140,000).
- Houston. Compared with other metropolitan areas, it's loaded with vacancies—simply because apartment living hasn't really caught on. Landlords will put in room partitions, install extra storage cabinets, come down on rent to attract tenants. But prices run up to \$1,000 a month.

Outlook: A softer market next year as building activity increases.

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Cruise News: Advance bookings for winter cruises are running strong. There'll be 452 cruises, a big increase over last year, sailing from East Coast and Gulf ports between Nov. 1 and late April. But with the season likely to break records, you'd better book early to get top accommodations.

Note that several ships are making their debuts on the cruise circuit—among them the Italian Line's Cristoforo Colombo, the French Line's Liberte (Christmas-New Year's trips to the Caribbean), and American Export's Atlantic (two long Mediterranean cruises).

Jet power for small boats is gaining popularity. A new system, called Sea Jet, uses a jet of water to power and steer a boat. Change the jet's direction, and the boat changes course. One advantage: Boats using Sea Jet can operate through shallow water, even through heavy debris and weeds, because no propeller or rudder is required. A small, 150 hp. unit weighs 90 lb., costs \$495 (Vanguard, 906 Main St., Cincinnati 2, Ohio).

Another company (Indiana Gear Works, 3119 Roosevelt Ave., Indianapolis 7, Ind.) has an inboard boat on the market, with jet power already installed. Runabouts and small cruisers sell for about \$3,400 to \$5,000.

If golf scores have "bugged" you this season, take heart from a lively, off-beat book, Out of the Bunker and Into the Trees, by Rex Lardner (Bobbs-Merrill, \$2.95). Sample subjects covered: how to loft a ball out of your trouser cuff, how to apply Body English. Follow his advice, says the author, and you can cut 20 to 60 strokes from your game.

For fishermen, there's a collection of short, whimsical, almost-true stories called Trout Madness, by Robert Traver (St. Martin's Press, \$4.95).

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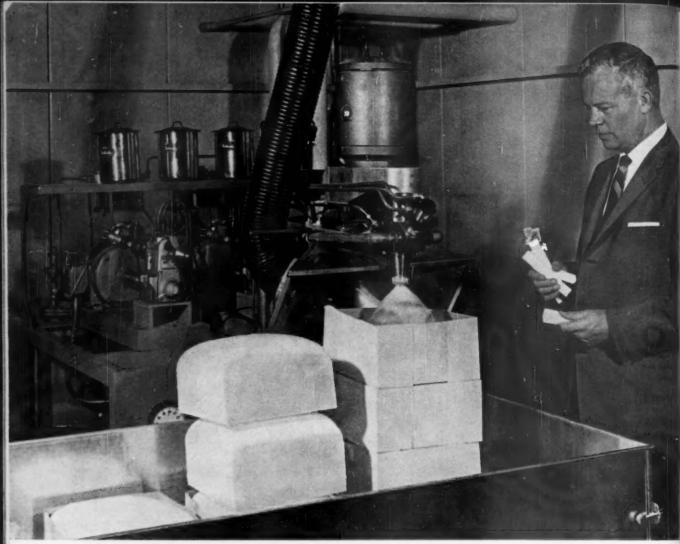


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The executive besieged by computer salesmen almost needs a computer to figure out which one he should buy.

Layman's Guide to Computers

New chart catalogues the characteristics of 43 generalpurpose computers available to businessmen.

The executive above is fishing for an answer sought by many businessmen around the country: When you're ready for a computer, which one do you buy and why? To the uninitiated, today's computer families have enormously complicated blood lines, and the executive shopping for a computer almost needs one just to figure out which machine he should get.

Because of this, a tiny consulting firm in Bedford, Mass., has undertaken a fairly good-sized project. To mark the end of its first year in business, Charles Adams Associates has assembled what, for its size, is probably the most meaty, up-to-date chart available on computer characteristics. It

covers all 43 general-purpose, stored program, electronic digital computers that can be ordered today from the industry's 16 manufacturers in the U.S. The few machines omitted are special-purpose computers designed for a single job, or those used solely for on-line process control.

• Big Market—A lot of money is spent by businessmen on computers. Production of computers last year hit about \$400-million, plus about \$400-million more in accessories such as printers and tape units. Manufacturers are talking excitedly about a 20% to 25% climb in sales for 1960. Yet a potential customer may wonder what he is paying for, since some computers run to only four figures, and others to five or six figures.

The difference in price largely depends on the speed and logic capacity of the computer. A number of characteristics determine how fast the computer will operate and the complexity

of the problem it will solve. It is these characteristics the Adams chart attempts to catalogue. There have been other general charts before, but probably none that pried into computer pedigrees the way the Adams chart does. One reason there haven't been more efforts along this line is the fact that computer makers-a shrewd and fussy lot-don't always see eye-to-eye on how machine speeds should be measured. So with so many ways to judge performance, it takes somebody standing on the outside to translate the industry's overwhelming slew of figures on capacity, speed, coding, and the like into realistic comparisons.

For MIT-frained Charles Adams and one of his staff members, Norman Statland, this has meant two months of haggling with manufacturers, relentless brain-picking with other experts, and poring through manuals and technical bulletins. "The big job," Adams says,



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Expert examination is needed to compare characteristics of different models.

"was getting manufacturers to agree on a common frame of reference for their machines, where you couldn't say explicitly that this model does this, and that's it."

• When to Buy—The major question that's left unanswered by the chart is whether or not to buy or rent a computer. Various experts claim that a company shelling out \$6,000 to \$7,000 a month on data processing is ripe for Electronic Data Processing (EDP). Statland and Adams balk at any such arbitrary figure.

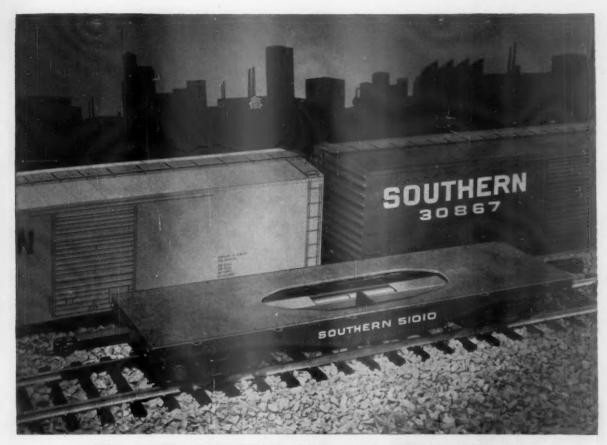
The size and complexity of the operation is important, but not the most important consideration. "It has more to do with labor costs, and whether you really have standardized operations," according to Statland.

• What's in the Chart—Adams Associates compilation on pages 172-3 gives a good picture of the wide variation in price and operating characteristics of computers now on the market.

• Price—The bulk of the machines whirring along today are rented rather than sold. Rental prices vary enormously, as the chart shows. The figures in the chart are only averages and could swing 30% either way without much strain, depending upon how many fancy accessories the user wants. If a customer decides to buy, one fairly dependable rule-of-thumb for determining the computer's purchase price is to multiply its average monthly rental by 48.

• Tubes or Transistors—The first computers made were non-solid-state machines. This means that they use conventional vacuum tubes in their central logic system. As a result, the machines give off a good deal of heat and it is necessary to replace the tubes fairly often.

Most of the computers now being manufactured are solid-state units whose logic systems are composed of solid-state magnetic devices, transistors, and diodes. These machines use less power, throw off less heat, take up less space, and are more reliable, since transistors



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Everyone suffers because of shipping damages. They have plagued railroads and shippers over the years. In fact, damage claims paid have reached the staggering total of \$114,000,000 per year, in spite of every precaution taken by zealous railroad men.

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tors 960 To help eliminate this waste and to speed shipments, Bendix®, with the cooperation of the Southern Railway, has developed an

ingenious shock absorbing system for freight cars.

Borrowing from its experience in building shock absorbing landing gears which cushion the landing loads of gigantic bombers and passenger planes, Bendix has applied hydraulic shock

Bendix shock-absorbing hydraulic cylinder and landing gear for Boeing 707-720 jetliner.

absorbing cylinders to the frame of the freight car, as pictured in the scale model above. When the car is bumped, the shock is transmitted to the hydraulic cylinder which "soaks it up."

In dramatic tests the Southern Railway violently "test-bumped" a load of 21,000 ginger ale bottles in a conventional car and wound up with 2,096 broken bottles. When the test was repeated—this time in a car with

Bendix shock absorbers—only 19 bottles were broken.

So happy has everyone been with the results of the Bendix shock absorber system tests that the Southern has ordered it installed on 100 of its new cars, built by the Pullman Company. Besides offering increased protection to ordinary consumer merctandise, the new system can also be used to protect the shipment of missiles and other fragile cargoes.

Bendix contributes to increased railroad operating efficiency in other significant ways. Our two-way radio is now used by 55 major roads to speed up hundreds of railroading operations by providing instant communication between trainmaster, train crew, and yard workers. The world's mightiest self-powered locomotive, operated by the Union Pacific Railroad, depends on Bendix fuel injection and fuel ignition systems to help keep its mighty power flowing smoothly and efficiently on less expensive, low-volatile fuel.



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matically calculates, positions the carriage, and types results. For use with more extensive data processing equipment, either Punched Card or Punched Tape Output is offered as an optional feature. For more detailed information as to how you can benefit from use of the IBM 632 Electronic Typing Calculator with Posting Carriage, please contact your local IBM 632 representative.

IBM The IBM 632 Electronic Typing Calculator

and magnetic devices have a longer life than vacuum tubes.

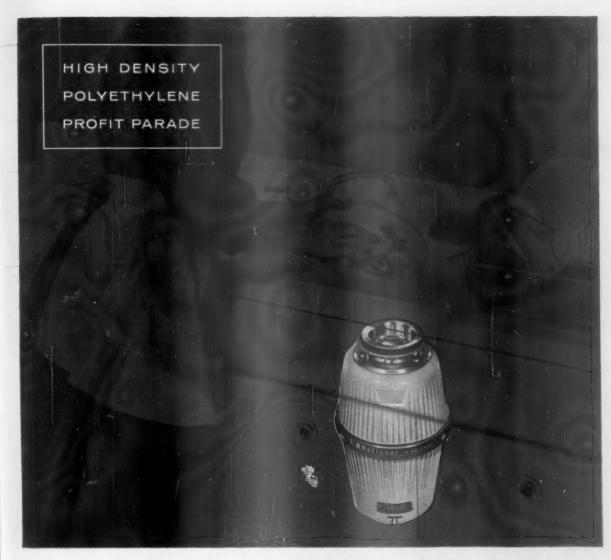
Another difference among computers is the type of data storage. Basically, there are two broad types of storage: "external" storage outside the computer, and "internal" storage located inside the machine. Both do the same job—they store information in code, which the computer uses for its calculations. External storage, which includes tapes, disks, or punched cards, has pretty much unlimited capacity. But, it might take anywhere from a few seconds to a minute to get information from external storage, while internal storage is accessible instantaneously and is a basic determinant of a computer's speed and capacity.

• Internal Memories—There are two types of internal storage: drum or magnetic core memories. A drum memory is slower than a core memory because the sensor sometimes must scan the complete drum before finding what it's after. Some computer makers build a "fast" speed into their drum units to accelerate the internal processing rate.

Most newer computers have magnetic core memories. These essentially are banks of little doughnut-shaped magnetically sensitive ceramics connected by wires. Thousands of these pinhead-sized cores will go into a single logic system. Since the magnetic core systems have no moving or wearing parts, they are considered superior to drum memories.

· Word Size-Information is retrieved from a stored program computer by testing to see whether certain elements are magnetized or non-magnetized. For this reason, these computers are considered "binary," which means they process all information in terms of one and zero. It takes so many binary digits or bits to make a word or decimal figure. In a core memory, what determines the actual word itself is the sequence of the magnetized and nonmagnetized cores. A particular word or instruction, for example, might be represented by magnetizing the 2nd, 8th, and 10th cores, while the others are left non-magnetized. Essentially the same principle applies to drum memories. But instead of using row upon row of cores, tracks or bands on the drum are used.

Different computers are capable of handling different word sizes. The word size determines how big a number you can work with. For example, the chart on pages 172-3 indicates that the IBM Stretch has a word size of 64 binary digits. This means that within a single word size the machine could work with an ordinary "whole" number, without decimals or fractions, of up to 20 digits. The IBM 7090 is a 36-binary machine and can handle up to an 11-digit number within a single word size. There are



Grace Plastic Upgrades New Appliance Model

The new Citation Model National Disposer shows how the use of Grex high density polyethylene results in upgrading a product to increase its consumer appeal.

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Made by the Plumbing Equipment Division of National Rubber Machinery Company, the appliance grinds food wastes into micro-sized particles that wash down the drain. Its primary appeal is freedom from garbage-handling chores. Three additional sales-stimulating features are direct results of specifying Grex for the housing:

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In addition to these features, the housing is strong, rigid and virtually indestructible. It cannot rust, is unaffected by chemicals normally corrosive to other materials and withstands the high temperature of boiling water.

If you are looking for ways to upgrade your product it will pay you to find out exactly what high density polyethylene has to offer by calling in the experts. Grace has the production, technical, and marketing facilities to help put your product in the Grex profit parade. Everyone says we're easy to do business with.

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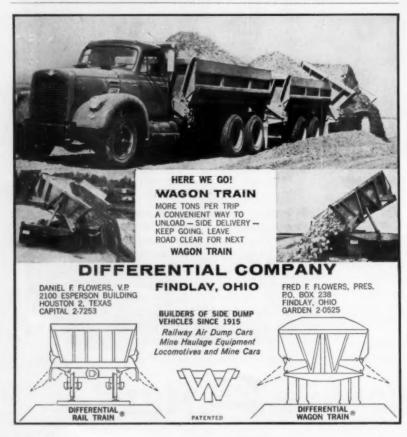


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Manufacturers disagree on how computer performance should be measured.

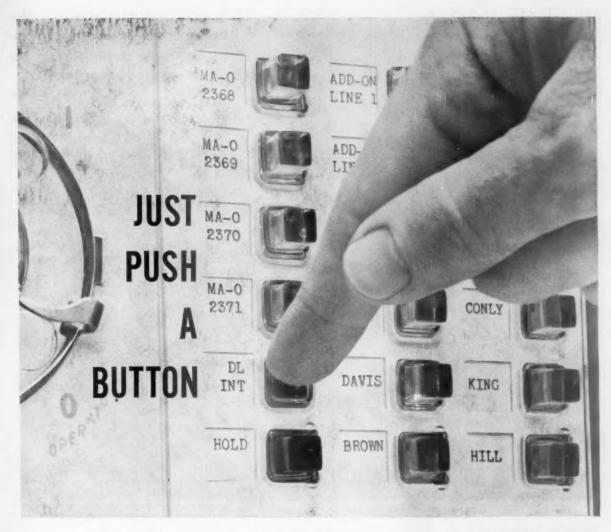
several ways, of course, to get into even bigger numbers in these computers such as putting two word sizes together for a single number.

• Three Classes—Even though all internal storage computers use the binary principle of magnetized and non-magnetized elements, they are wired differently inside. This means that they are programed differently. Accordingly, stored program computers can be divided into three classes: regular binary computers, alphanumeric computers, and decimal computers.

The regular binary computer is thought by most businessmen to be the most difficult to program. That's why it's not generally used for business data processing. The difficulty is in the concept of communicating with the computer. In a sense, the programer must speak the computer's own language to work with the machine. However, this type of computer performs fewer and faster internal operations to solve complex engineering and scientific problems, and therefore gives the fastest results for such problems.

The alphanumeric computer, on the other hand, generally is easier to use if you want to program business problems, because the programer works with letters and numerals. However, the extra circuitry used to handle the alphanumeric code means somewhat slower internal operations. This computer is best suited for handling problems dealing with inventory, payroll, and other areas explained in alphabetical and numerical terms.

Somewhere between the binary and alphanumeric machines is the decimal computer. Decimal computers are programed numerically, using numeric digits only. Two numeric digits are used to represent an alphabetic character. It can do both scientific and business problems on a fairly large scale, though it isn't so efficient on business or alphabetic problems as the alphanumeric unit, nor so speedy on heavy engineer-



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ric er... a real boon to busy businessmen. It puts the people you work with right at your fingertips. No office communications system ever kept you so much "in touch."

You make inter-office calls by merely pushing a button or dialing a number. In case of a busy signal, a special "camp-on" feature automatically connects you when the line is free.

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You can pick up calls on as many as 29 outside, extension or intercom lines . . . and *hold* calls on several lines if necessary.

Just one example ...

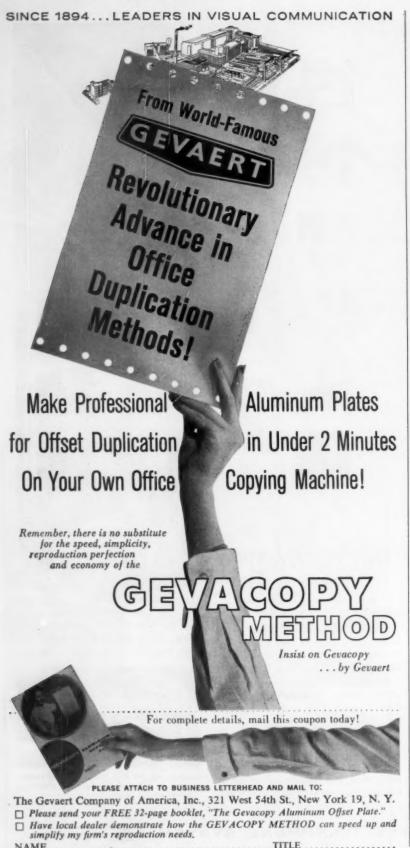
The Call Director telephone with Bell System intercom is typical of many new Bell System advances in business communications which could boost operating efficiency and profits for your firm. Get the whole story. Just call your Bell Telephone business office, and a Bell representative will visit you. No obligation, of course.



Available in this 18-button executive model, as well as a 30-button secretarial model... in green, gray or beige.

BELL TELEPHONE SYSTEM





. . . any computer will solve the same problem if the programing is adjusted to the computer being used . . .

(STORY on page 163)

ing or scientific jobs as the binary machine.

Where a computer in the chart is listed "for" business, this doesn't mean the machine hasn't or won't be used for scientific or engineering problems. "Use" here merely refers to the most common application up to now.

Actually any computer will solve the same problem if the programing is adjusted to the computer being used.

· Speed-The other headings in the chart mainly cover the computer's Various characteristics deterspeed. mine this:

Instruction addresses are separate storage areas in the computer. Some computers only have one. Others have two or three. The advantage of a threeaddress system, for example, is that only one instruction may be needed for certain three-step problems, whereas three separate instructions may be necessary in a single-address system for these same

Add time is the length of time it takes for the computer to receive and execute

an "add" instruction.

Average access time is the time needed to get into the memory, read it, then get back out again. This is part of the add time.

Magnetic tape speed indicates how quickly data can be read into and out of the computer from external tape

Time sharing describes how many jobs the computer can do at once: reading (R), writing (W), and computing (C). If the computer can do all three, it is marked by the symbol (RWC). Some machines can do multiple reading, writing, and computing (MRWC), which often means they can do work on several problems at once.

Random access file is an auxiliary storage unit with large capacity, but a little slower access than internal "fast access" storage. This is because the file, in the case of disk storage, is external and there's a time-consuming mechanical action involved in choosing the right disk from a stack of disks.

Peripheral equipment covers the computer's speed in digesting incoming data (input), and producing the final tabulated data desired (output), whether in the form of punched cards, paper tape, or actual printed lines.

· What's the Best Buy?-Detailed as the chart is-and this is an abbreviated version (the full chart is available from Adams Associates)-it obviously isn't the



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Better Things for Better Living . . . through Chemistry



Comparing the Computers

	—GEN	ERA	L CHARACTERIST	1 SPEED 1 Input Output												
	AVERAGE MONTHLY BEHTAL	SOLID-STATE	STORAGE CAPACITY AND TYPE (K = 1000 words)	WORD SIZE	INSTRUCTION ABORESSES	ADD TIME (L = microseconds)	AVERAGE ACCESS TIME (m=milliseconds)	MAGNETIC TAPE SPEED IN THOUSANDS OF CHAR- ACTERS PER SECOND	TIME SHARING RANDOM ACCESS FILE	CARDS PER MINUTE	PAPER TAPE CHAR. ACTERS PER SECOND	CARDS PER MINUTE	PAPER TAPE CHAR- ACTERS PER SECOND	PRINTER LINES PER MINUTE	BUSINESS	MINTERCANGINETIES
IBM 7030 STRETCH	\$200,000	•	16-262K core	64b	1	2μ	1μ	62	MRWC	1000		250				
UNIVAC LARC	\$135,000	•	10-97K core	12d	1	4μ	4μ	25 133	MRWC							9
IBM 7090	\$64,000	•	32K core	36b	1	4.4μ	2.2μ	15-62	MRWC	250		100		150		
IBM 7080	\$55,000	•	80-160K core 1K core	10	1	12μ	2.2μ 1.1μ	15-62	MRWC	250		100		150 500	•	1000
UNIVAC 1105	\$43,000		8-12K core 16-32K drum	36b	2	44μ	8μ 17m	25	RWC	120 300	200	120	60	600		
IBM 709	\$40,000		4-32K core	36b	1	24 µ	12μ	15	MRWC	250		100	3	150		
UNIVAC 1103A	\$35,000		4-12K core 16K drum	36b	2	44μ	8μ 17m	13	RC, WC	120 240	100	120	60	600		
CONTROL DATA	\$34,000	•	8-32K core	48b	1	5 µ	4.8 µ	30	MRWC	1300	350	200	60	1000		
RCA 601	\$32,000	•	8-32K core	56b		6 µ	.9- 1.5μ	22-120	MRWC	600	1000	100	100 300	600 900		
BM 704	\$32,000		4-32K core	36b	1	24 µ	12μ	15	RC, WC	250		100		150 500		•
PHILCO 2000	\$30,000	•	4-32K core	48b	1	15μ 4.5μ	10 μ 2 μ	90	MRWC	2000	1000	100	60	900		
IBM 705	\$30,000		20-80K core	10	1	86 μ 119μ	9 μ 17 μ	15-62	RWC	250		100		150 500	•	
UNIVAC II	\$28,000		2K core	12a	1	200 μ	40μ	25	RWC	240		120		600		10
18M 7070 7074	\$24,000 \$29,300	•	5-10K core	10d	1	60 μ 10 μ	6 μ 4 μ	15-62	RWC	500		250		150	8	
HONEYWELL H-800	\$22,000	•	4-32K core	12d	3	24μ	6 µ	64	MRWC	240 650		100 250	60	150 900		
BENDIX G-20	\$20,000		4-32K core	32b	1	21μ	8.4μ	60	MRWC	800	500	250	100	600		
UNIVAC III	\$20,000	•	8-32K core	6d	1	9 µ	4.5μ	25 133	MRWC	700		300		700		
BURROUGHS 220	\$17,000		2-10K core	10d	1	200μ	10μ	25	none	300	1000	100	60	150 1500		
RCA 501	\$16,000	•	16-262K core	la	2	360 µ	15μ	22-66	RC, WC	400	1000	150	100 300		•	19
GENERAL ELECTRIC 210	\$14,000	•	4-8K core	6d	1	64μ	32 µ	30 50	RWC	400 1500			60	1000	•	
NCR 304	\$12,500	•	2-4K core	10a	3	600 μ 120 μ	60 µ	30	RW	2000	1800	250	60	850 1200	•	10

How Much

How Fast

Who Makes Which Computer: Autonotics Div. of North American Aviation Corp. — Recomp II; Bendix Corp. — G-20, G-15; Burroughs Corp. — 220, 205,E-101; Control Data Corp. — 1604, 160; Digital Equipment Corp. — PDP-3, PDP-1; El-Tronics, Inc. — Alwac III-E; General Electric Co. — 210, 225; International Business Machines Corp. — Stretch (7030), 7090, 7080, 709, 704, 705, 7070, 7074, 650, 1401, 305, 1620; Minneapolis-Honeywell Regulator Co. — H-800, H-400; Monroe Calculating Machine Co., Inc., Division of Litton

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complete word on computers. In the table, the Control Data 1604, for example, looks like a better buy than IBM's 7090, priced at almost twice the amount of the 1604. In many ways, the

1604 is as fast, if not faster, than its IBM counterpart. However, there are any number of reasons for the price difference. IBM, a much bigger company than Control Data, throws in

extra services that Control Data doesn't. On the other hand, Control Data, because of its smaller size and smaller overhead, could be passing on such savings to the buyer. Then again, any

Comparing the Computers

	GENERAL		CHARACTERIST	ACTERISTICS INTERNALFILE STORAGE PERIPHER					RAL EQUIPMENT									
	AVERAGE MONTHLY RENTAL	SOLID-STATE	STORAGE CAPACITY AND TYPE (K=1000)	WORD SIZE	INSTRUCTION ADDRESSES	ADD TIME (µ=microseconds)	AVERAGE ACCESS TIME (m≡milliseconds)	MAGNETIC TAPE SPEED IN THOUSANDS OF CHAR- ACTERS PER SECOND		TIME SHARING	RANDOM ACCESS FILE	CARDS PER MINUTE	PAPER TAPE CHAR- ACTERS PER SECOND	CARDS PER MINUTE	PAPER TAPE CHAR- ACTERS PER SECOND	PRINTER LINES PER MINUTE	PUSINESS SOUTH PROPERTY OF	BOTH
NIVAC File	\$12,000		180 K drum 1K drum	12a	3	8.6m	17 m 3.1 m	10.4	RV	vc	•	150 240	200	150 120	60	600	•	
INIVAC is 80/90	\$9,000	•	4K drum 1K fast	10d	1	85μ	1.7m - 425m	25 R	C, W	C	•	450 240		150 120		600		
BM 650	\$9,000		60 core 1-4K drum	10d	1	.7m	.1m 2.4m	15 R	C, W	C	•	155 250	60	100- 250		150		
HONEYWELL H-400	\$8,700	•	1-4K core	12d	3	220 µ	8 µ	64	R\	N		650	1000	100 250	60	900	•	
GENERAL ELECTRIC 225	\$8,000	•	8-16K: core 8-32K drum	21b	1	40 μ	20 µ	15 55	M	RWC	•	400	1000	100	60	600		0
BURROUGHS 205	\$8,000		4K drum 80 fast	10d	1	1.7m	8.5m .85m	6	ne	one	•	300	540	100	60	150		C
IBM 1401	\$7,500	•	1.4-16K core	la	2	230μ	11.5μ	15-62	n	one		800		250		600	0	
RCA 301	\$5,000	•	10-20K core	la	2	189μ	7 µ	7.5	R	c, WC	0	600	100	100	100	600	•	
DEC PDP-3	\$4,400		4-32K core	36b	1	10μ	5μ	15	R	, wc			400		60			
IBM 305	\$3,600		2,000 drum 5-40,000 K d		2	30m	10m	15	R	c, wo	•	125	20 60			30-50 150	•	
EL-TRONICS ALWAC III-E	\$3,600		4-8K drum		1	1m	4m	21	R	c, wo	:	100	200	100	60	150		1
AUTONETICS RECOMP II	\$3,000	•	4K disc 16 fast	40b	1	9.5m 1.49m	9m .95m						400		20			•
RPC 9000	\$2,500	•	72 delay	120	1	.23m	.8m	52	N	RWC	•	400	500		300	150		
DEC PDP-1	\$2,200		1-4K core	18b	1	10μ	5μ	15	R	c, wo			400)	60			
RPC 4000	\$1,800	•	8K drum 128 fast	32b	1	1.0m	8.5m 5.0m						60 500		300			
IBM 1620	\$1,600		20K core	1d	2	560µ	20 µ						150		15			
BENDIX G-15	\$1,500		2K drum 16 fast	29b	1	1.08m	14.5m		R	c, w	С	100	400	100	60	100		
CONTROL DATA	\$1,500	•	4K core	126	1	12.8μ	6.4μ	15	r	one	(130	350)	60	1000		
PACKARD BELL PB 250	\$1,200	•	1.8-16K dela 16 fast	y 22h	1	24μ	1.5m	-	r	one			300		110			9
RPC LGP-30	\$1,100		4K drum	31k	1	2.26m	8.5m	1					200)	20	1		0
BURROUGHS E-10	1 \$1,000		220 drun	120	1		10m				-		20	_	10)	0
MONROBOT XI	\$700		1K drun	32	1	9m	6m					1					0	

How Much

How Fast

Industries — Monrobot XI; National Cash Register Co. — 304; Packard-Bell Electronics Corp. — PB 250; Philte Corp. — 2000; Radio Corp. of America — 601, 501, 301; Remington Rand Univac Div. of Sperry Rand Corp. — Larc, 1105, 1103A, U II, U III, File Computer I, SS 80/90; Royal McBee Corp. — RPC 9000, RPC 4000, LGP-30.

CAUSINESS WEEK

of these machines in the chart may simply be underpriced, while others are overpriced.

Among all 16 manufacturers listed, there's bound to be a variable in the

dependability of their machines, the availability of parts for them, customer service offered, terms of rental agreements, and so on. Even the technical data itself cannot be fully boiled down

to fit precisely into a chart. All models listed in Adams' chart represent only averages. Thus, computers such as IBM 1401, RCA 301, and several others actually have variable word lengths.

rp. – rp. – iness polis-Litton

NEW PRODUCTS

Speedier Production Tab-Keeper

The machine in the pictures—a Productograph—may prove just the headache pill that production control men have needed in smaller job-shops.

Right now, most production control is carried on with complicated charts and graphs that sometimes take so long to put together that they are of little practical use to the supervisor.

To speed things up, the Productograph—a German system available from Farrington Instruments Corp., a subsidiary of Farrington Mfg. Co.—gives the supervisor direct communication to the shop, so he has an automatic, running record of what each machine is doing.

• Information at a Glance—At a large console, the supervisor can tell at a

 Which machines are operating, which ones are down, and why they're not running. This comes in a permanent, written record, as well as a visual record.

 What the total production time has been in the plant compared with the total downtime (which may be due to any one of five types of troubles).

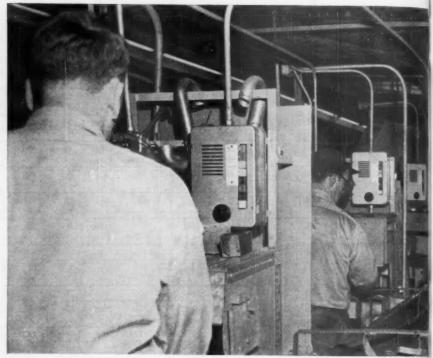
How many units have been produced.

How close each machine operator is to completion of his order. This
information is provided in a visual, bartype graph that gives a running box
score of each machine's output and how
much each order calls for.

 Whether the "frequency" or cycle of production of one operator is up to par with other machine operators in the plant. This also comes in a permanent record that can be stored.

· Direct Contact-The real key to the system probably lies in the direct contact between machine operator and supervisor. This takes two forms. When a piece of equipment shuts down, a red light flashes on a small control box above the machine. Immediately, the operator is supposed to push one of several buttons on the box to explain to his supervisor up front why his machine is down. This registers on the console. If the operator doesn't push a button, then the supervisor-who can see from the console that the machine is down-will check back to see what happened.

To strengthen this communication, the Productograph comes with a hand-set telephone, and intercom system, or both, depending upon how much noise there is in the plant or what type of plant communication the manufacturer may already have. The Productograph's



INSTANT CONTACT between each of 40 machines and supervisor at Connecticut Bending & Stamping Works is provided by control box at operator's right.



CONSOLE of Productograph shows at a glance what each machine is doing, with running box score on plant output—and information to compute incentive pay, besides.



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HAMBERSBUR DESIGNERS AND MANUFACTURERS OF THE IMPACTER basic system includes both, along with a tape recorder that automatically takes down the intercom conversations.

· German Origin-The North American rights for manufacturing and selling the Productograph were acquired recently by Farrington from Joseph Mayr Co., a German firm. Until Farrington's new plant is in production next year, the equipment will be supplied from Germany.

So far, 22 systems are on order in the U.S., but only two have actually been installed here. One-shown in the pictures on page 174-is at Connecticut Bending & Stamping Works in New Britain, Conn., and the other at the Holo-Krome Screw Corp. in Hartford, Conn., a subsidiary of Veeder-Root, Inc. Both companies-with less than 250 employees each-claim their downtime has been sliced over 20% with Productograph. In Europe, where 200 systems have been installed, one plastics maker cut his downtime 80%, according to Farrington.

· Saving on Time-The system helps slash downtime in a number of ways. It puts the supervisor in a better spot to deal with downtime by giving him an immediate record, close at hand, on the work status of each machine-with the machine operator no further away than the intercom or handset telephone.

Using Productograph, says Farrington, the supervisor can often anticipate some production snags far enough in advance to prepare for them. For instance, he can tell right away when one operator is almost finished with an order, and get the next order and new materials to him before the run is completed. This eliminates downtime due to lack of an order or materials.

By actually knowing what causes downtime-frequent breakdowns, tool changes, lack of orders, or what-the supervisor is also better equipped to do something about it. Obviously, he can't just rush in and stop a tool breakdown, but he can speed up the orders to the machinist, or get parts or materials to him before the operator runs out and

has to shut down his unit.

· Help on Work Scheduling-The Productograph should also ease one of the supervisor's biggest troubles-gauging the "loading" time or work scheduling of machines so that their work is coordinated and several machines aren't idle, waiting for others to produce parts or units for them. This is probably one of the major causes of downtime. The basic chore of machine loading can't be done by the Productograph, of course, but Farrington claims the data it furnishes the supervisor simplifies the basic "loading" job.

For instance, one of the bar graphs built into the Productograph is essentially an automatic Gantt chart-a widely used graph designed for work

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the nicest things happen to people who carry FIRST NATIONAL CITY BANK TRAVELERS CHECKS scheduling. It tells the supervisor how far along a machine is with a given order of so many units.

• Two-Way System—One other salient advantage plugged by Farrington is the responsibility the system places on the individual operator. Because he must account more specifically for his time, Farrington feels the machine operator will cut down on 'personal' downtime or needless delays. If the downtime of one operator is running higher than the downtime of the others in a plant—and this is easily enough checked with the Productograph—then the supervisor can see it and straighten things out.

• For Rent-The Productograph system is leased in packages for control of 20 machines each. Though a manufacturer's machines may not come in even multiples of 20, the average manufacturer probably doesn't need all his machines monitored closely. "Usually, it's just those machines that are running continuously without letup," says Jacob Saliba, executive vice-president of Farrington Instruments.

The basic 20-machine system, including 20 handset telephones and 20 intercoms, will rent for about \$1,000 monthly. This covers maintenance. Several 20-machine systems can be plugged into a single console, so the only actual limit on the number of machines a single supervisor can control is simply the number he can follow on the console and auxiliary graphs. Because the tab for the first 20 machines includes the console price, the rental for hooking up a second or third bank of 20 machines should be somewhat less.

· Competing Systems-Productograph, as the latest of a number of entries in this growing field, will face its stiffest competition in selling to manufacturers that have central data processing computers. There, it'll be bucking competitors like Friden Corp., International Business Machines Corp., and Stromberg Time Div. of General Time Corp. All three manufacture data collection systems that directly produce either punched card or punched tape input for computer analysis. Although these systems, designed to be hooked up to computers, can be much more sophisticated, they don't produce the instantaneous visual record that shows up in the flashing lights and graphs on the Productograph console. More directly, Productograph will be competing against Hancock Industries, which manufactures the Telecontrol System. Telecontrol is similar to the Productograph, in that it features a two-way telephone contact between each machine operator and the supervisor, and automatically keeps track of production and downtime. However, it doesn't go as deeply into the causes for downtime as Productograph. END





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Growth Abroad Versus Growth at Home

One of the most striking business trends of the day—and one whose significance has yet to be thoroughly analyzed or weighed—is the great increase in investment by U.S. manufacturers in foreign facilities (page 25). This trend becomes all the more provocative when set beside two other major developments: the flattening and possible decline in domestic capital spending and the continuing pressure on the U.S. balance of payments.

Are the three trends interrelated? Should we be concerned that heavy U.S. investment abroad is diverting funds away from domestic investment and aggravating our balance of payments problems?

There is little justification for leaping to the conclusion that foreign investment is at the expense of domestic investment. The blocks to expansion of domestic investment appear to be excess capacity and the squeeze on profits here at home.

And it's by no means self-evident that this foreign investment will lead to a further deterioration of the U.S. international financial position.

A very large proportion—about 90%—of U.S. investment abroad will go into new facilities rather than into the purchase of existing plants. Much of the machinery and equipment for those new plants is going to be bought in the U.S. But the effect on U.S. exports may well be greater than the spending for machinery. This expansion should generally stimulate demand for U.S. exports.

The expectation of growing overseas markets was the most important single reason given by American companies included in the McGraw-Hill survey for their decision to invest abroad. If these expectations prove correct, the U.S. economy may gain from foreign economic growth. This, after all, was the old Marshall Plan argument that it would be to our self-interest to help rebuild the free world economy. There is plenty of reason to think that argument still has validity.

But the feeling that this migration of U. S. capital abroad may not be an unmixed blessing will not down easily. No one can be sure that heavy overseas investment will not impose some additional strain on U. S. currency and gold reserves. U. S. producers—and U. S. labor—are going to have to worry more and more about costs and prices and the quality of products. Our entire economy is going to be more vulnerable to shifts in the winds and weather of business abroad. We may soon find that it was a luxury to have a largely closed economy. This will be particularly true for government policymakers who have been able, up until now, to stimulate the domestic economy with scant concern about the prices or interest rates prevailing abroad.

Some may conclude that the sensible thing, therefore, would be to turn inward again—to block

foreign competition here at home and even to impose restrictions on American investment in foreign countries. This case for protection and isolation may grow if we get into worse trouble and if European barriers against U.S. goods don't come down—barriers that are an underlying reason why U.S. companies are moving fast to build plants in that area.

At this point, however, there is no sense in trying to restrict U.S. investment abroad. The main reason companies are going abroad, after all, is because markets abroad are growing rapidly. If we are concerned about this competition for the U.S. investment dollar, the way to counter it is by stimulating faster growth at home.

The migration of U.S. capital and the necessity of making the U.S. market more attractive to U.S. investors thus turns out to be an aspect of our most pressing general economic problem—achieving a faster rate of national economic growth.

Cheap Money?

The issue of economic growth was also the theme of Sen. John F. Kennedy's Labor Day address to the crowd in Cadillac Square in Detroit. He was concerned about the growth-arresting effects of tight money.

Naturally, a political candidate wants his Labor Day address to be dramatic. Nevertheless, this speech strikes us as slightly demagogic.

"Those of you who bought a home for \$10,000 with a 30-year mortgage," said Sen. Kennedy, "are going to pay out \$3,300 more for that house than you would have paid in the Truman Administration." This presumably brought home the evils of the Republican "high-interest-rate policy."

From time to time, BUSINESS WEEK has taken exception to the Administration's and the Federal Reserve's monetary policies. We certainly do not deny the same right to others.

But does Sen. Kennedy really propose to run on a cheap money program? Is he suggesting that we should maintain low interest rates under any and all circumstances—including periods of inflation?

Oversimplification and political dramatics should have their limits. Economic stability as well as economic growth is, after all, an important aim of government policy. A flexible monetary policy—which means higher interest rates when necessary—is essential to economic stability.

These questions of economic and monetary policy are complex and important. One eye-catching phrase or example isn't enough to allow a candidate's position to be understood. We hope that Sen. Kennedy—and Mr. Nixon—will give the voters a fair and full statement of their positions.



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